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RUSH MEDICAL COLLEGE

EIGHTY-FIRST ANNUAL ANNOUNCEMENT

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CALENDAR OF RUSH MEDICAL COLLEGE

1923

June 18, Monday.—Summer Quarter begins.
July 2, Monday.—The Fiscal Year of the College begins.
July 4, Wednesday.—Independence Day: a holiday.
July 26, Thursday.—Second Term, Summer Quarter begins.
Aug. 30, 31, Sept. 1, Thursday, Friday, Saturday.—Quarterly Examinations.
Sept. 1, Saturday.—Summer Quarter ends.
Sept. 1–Oct. 1.—Summer Recess.
Oct. 1, Monday.—Autumn Quarter begins.
Nov. 8, Thursday.—Second Term, Autumn Quarter begins.
Nov. 29, Thursday.—Thanksgiving Day: a holiday.
Dec. 19, 20, 21, Wednesday, Thursday, Friday.—Quarterly Examinations.
Dec. 21, Friday.—Autumn Quarter ends.
Dec. 22–Jan. 1.—Quarterly Recess.

1924

Jan. 2, Wednesday.—Winter Quarter begins.
Feb. 11, Tuesday.—Second Term begins.
Feb. 22, Friday.—Washington's Birthday: a holiday.
March 20, 21, 22, Thursday, Friday, Saturday.—Quarterly Examinations.
March 22, Saturday.—Winter Quarter ends.
March 22–March 31.—Quarterly Recess.
March 31, Monday.—Spring Quarter begins.
May 8, Thursday.—Second Term, Spring Quarter begins.
May 30, Friday.—Memorial Day: a holiday.
June 11, Wednesday.—3:00 P.M., Graduating Exercises; 5:00 P.M., Annual Business Meeting of the Alumni Association; 6:00 P.M., Annual Reception and Dinner of the Faculty and Alumni.
June 12, 13, 14, Thursday, Friday, Saturday.—Quarterly Examinations.
June 14, Saturday.—Spring Quarter ends.

CALENDAR OF THE UNIVERSITY OF CHICAGO

1923

June 9	Saturday	Alumni Day
June 10	Sunday	Convocation Sunday
June 11	Monday	College Day
June 12	Tuesday	Summer Convocation
June 13	Wednesday	Examinations for the Spring Quarter
June 14	Thursday	
June 15	Friday	
June 15	Friday	Spring Quarter ends
June 16	Saturday	Registration for the Summer Quarter
June 18	*Monday*	*Summer Quarter begins*
June 18–23		Examinations of the College Entrance Examination Board
July 4	Wednesday	Independence Day: a holiday
July 14	Saturday	Special Examinations for removal of deficiencies (work reported conditioned or incomplete) incurred during the last quarter of residence
July 24	Tuesday	Examinations for the First Term of the Summer Quarter
July 25	Wednesday	
July 25	Wednesday	First Term of the Summer Quarter ends
July 26	Thursday	Second Term of the Summer Quarter begins
Aug. 26	Sunday	Convocation Sunday
Aug. 30	Thursday	Examinations for the Second Term of the Summer Quarter
Aug. 31	Friday	
Aug. 31	Friday	Autumn Convocation Summer Quarter ends
Sept. 10–14		Examinations for Admission
Sept. 27–29		Registration for the Autumn Quarter
Oct. 1	*Monday*	*Autumn Quarter begins*
Oct. 6	Saturday	Special Examinations for all students returning for the Autumn Quarter who incurred deficiencies (work reported conditioned or incomplete) in the last quarter of residence
Nov. 29	Thursday	Thanksgiving Day: a holiday
Dec. 16	Sunday	Convocation Sunday
Dec. 18	Tuesday	Winter Convocation
Dec. 19	Wednesday	Examinations for the Autumn Quarter
Dec. 20	Thursday	
Dec. 21	Friday	
Dec. 21	Friday	Autumn Quarter ends

1924

Jan. 2	*Wednesday*	*Winter Quarter begins*
Jan. 26	Saturday	Special Examinations for removal of deficiencies (work reported conditioned or incomplete) incurred during the last quarter of residence
Feb. 12	Tuesday	Lincoln's Birthday: a holiday
Feb. 22	Friday	Washington's Birthday: a holiday
Mar. 16	Sunday	Convocation Sunday
Mar. 18	Tuesday	Spring Convocation
Mar. 19	Wednesday	Examinations for the Winter Quarter
Mar. 20	Thursday	
Mar. 21	Friday	
Mar. 21	Friday	Winter Quarter ends
Mar. 22–30		Quarterly Recess
Mar. 31	*Monday*	*Spring Quarter begins*
April 26	Saturday	Special Examinations for removal of deficiencies (work reported conditioned or incomplete) incurred during the last quarter of residence
May 8	Thursday	Annual Conference with Co-operating Schools
May 9	Friday	
May 30	Friday	Memorial Day: a holiday
June 7	Saturday	Alumni Day
June 8	Sunday	Convocation Sunday
June 9	Monday	College Day
June 10	Tuesday	Summer Convocation
June 11	Wednesday	Examinations for the Spring Quarter
June 12	Thursday	
June 13	Friday	
June 13	Friday	Spring Quarter ends

RUSH MEDICAL COLLEGE

IN AFFILIATION WITH

THE UNIVERSITY OF CHICAGO

HISTORY

Rush Medical College is one of the oldest institutions of learning in the Northwest, having been chartered by a special act of the legislature of the state of Illinois in February, 1837. It was founded by the late Daniel Brainerd, who was its first president. The first course of lectures was delivered in the second story of a frame building on Clark Street, near Randolph, in 1843. In 1844 a college building was erected at the corner of Dearborn Avenue and Indiana Street (now Grand Avenue), a structure which was remodeled and enlarged in 1855. In 1867 a larger building was erected on the site of the old one. This edifice was destroyed in the great fire of 1871 and for three years the College occupied a temporary amphitheater in the grounds of the Cook County Hospital, then located at Arnold and Eighteenth streets. In 1875 the present Clinical Building was erected, and in 1893 a Laboratory Building, which greatly increased the facilities for practical instruction, was erected on the south side of Harrison Street, opposite the Clinical Building. The facilities for clinical instruction were largely increased in 1903 by the addition of the Senn Building, seven stories in height, adjoining the Clinical Building on the east. In 1887 the College became the medical department of Lake Forest University, retaining, however, its autonomy. This relation was dissolved by mutual consent in April, 1898, and in the same month the present affiliation with the University of Chicago was established. In 1883 the Presbyterian Hospital, adjoining the College, was established, and the building then erected for the hospital was subsequently enlarged by the addition of the Daniel A. Jones Memorial and other additions. In 1908 an affiliation was entered into with the Children's Memorial Hospital similar to that obtaining with the Presbyterian Hospital. This was transferred in 1919 to the University of Chicago. In 1911 a similar affiliation was entered into with the Home for Destitute Crippled Children, and in 1915 with the County Home for Convalescent Children. Rush Medical College is one of the several institutions officially recognized by the Royal College of Physicians and Surgeons of London, England.

GOVERNMENT

The government of the College is vested in a "perpetual Board of Trustees" distinct from the teaching force of the College, which was constituted by a special act of the General Assembly of Illinois, in February, 1837, and of which the Governor of the state, the Lieutenant-Governor, and the Speaker of the House of Representatives are members ex-officio. This board is responsible to the State for the careful management of the financial and educational interests of the College and for the discipline of its students.

AFFILIATION

By the terms of affiliation with the University of Chicago, the Board of Trustees is composed of members not belonging to the teaching force of the College. This board assumes the financial management and appoints the Faculty, but delegates to the latter the control of the educational work subject to the rules of the University and the approval of the Trustees. The affiliation thus assures the maintenance of a higher order of instruction and a steady advance in modern educational methods. The University offers three Fellowships to graduates of the College, yielding the University fees and entitling the holders to the privileges of its biological laboratories. It provides for granting the degree of Bachelor of Science to students of the College who have had suitable preliminary education and who comply with the University regulations established for that degree. The courses of the first two years of the medical curriculum are offered at the University only.

LOCATION

The college is situated on West Harrison Street, between Hermitage Avenue and Wood Street, and may be reached by any of the trains of the Metropolitan Elevated Railway, the Marshfield Avenue station of which is three blocks east of the College; by the Ogden Avenue and Van Buren Street electric lines, which cross Wood Street two blocks north of the College; or by the Harrison Street electric car line, which runs on West Harrison Street.

The telephone number is West 0110.

Address all correspondence relating to the work of the last three years to Rush Medical College, 1748 West Harrison Street, Chicago, Illinois.

LOCATION OF THE UNIVERSITY OF CHICAGO

The University is situated on the Midway Plaisance between Cottage Grove and Dorchester avenues, and may be reached by the Cottage Grove Avenue electric cars (from Wabash Avenue), by the South Side Elevated Railway, by the Illinois Central Railroad to South Park Station, or by the Sixty-third Street electric cars from the Englewood railway stations.

Mail and baggage service is provided at the Information Office in the University Press Building.

The telephone number of the University is Midway 0800.

Address all correspondence relating to the work of the first two years to the Dean of Medical Students, University of Chicago.

THE BOARD OF TRUSTEES OF RUSH MEDICAL COLLEGE

OFFICERS OF THE BOARD

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Ernest A. Hamill, Vice-President
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Harry Pratt Judson, A.M., LL.D., President Emeritus of the University.

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Theophil Paul Grauer, S.B., Associate in Anatomy, University of Chicago.

William Cole Parker, Ph.D., National Research Fellow in Organic Chemistry, University of Chicago.

Meta Kunde, S.B., National Research Fellow in Physiology, University of Chicago.

Nathaniel Kleitman, Ph.D., Associate in Physiology, University of Chicago.

William A. Thomas, M.D., Associate in Medicine, 122 South Michigan Boulevard.

Fred Miller Drennan, M.D., Associate in Medicine, 122 South Michigan Boulevard.

Charles Klaus Stulik, M.D., Associate in Medicine (Pediatrics), 1658 West Twenty-first Street.

Lowell Delford Snorf, M.D., Associate in Medicine (Industrial), 25 East Washington Street.

Mabel M. Matthies, M.D., Associate in Medicine, 5 North Wabash Avenue.

Bertha M. Shafer, M.D., Associate in Dermatology, 25 East Washington Street

Clark Wylie Finnerud, M.D., Associate in Dermatology, 25 E. Washington Street.

Frederic William Burcky, M.D., Associate in Medicine, 122 S. Michigan Boulevard.

Marie G. Ortmayer, M.D., Associate in Medicine, 5414 East View Park.

Carl O. Rinder, M.D., Associate in Medicine, 122 South Michigan Boulevard.

Nicholas I. Fox, M.D., Associate in Medicine, 1500 West Taylor Street.

Kathleen Regan Harrington, M.D., Associate in Obstetrics and Gynecology, 104 South Michigan Boulevard.

Hugh James Polkey, Associate in Surgery (Genito-Urinary), 3810 Broadway.

Edward Howard Hatton, M.D., Associate in Pathology, 832 Michigan Avenue, Evanston, Illinois.

Morris Fishbein, M.D., Associate in the History of Medicine, 535 North Dearborn Street.

Harry R. Hoffman, M.D., Associate in Medicine (Nervous and Mental Diseases), 2705 West North Avenue.

Francis Leo Foran, M.D., Associate in Medicine, 4758 West Madison Street.

Robert Wood Keeton, M.D., Associate in Medicine, 1522 Howard Avenue.

Loren William Avery, M.D., Associate in Medicine (Nervous and Mental Diseases), 122 South Michigan Boulevard.

Ethel Mildred Davis, M.D., Associate in Medicine, 4708 Drexel Boulevard.

Earle B. Fowler, M.D., Associate in Ophthalmology, 31 North State Street.

William Almon Mann, S.B., S.M., Research Associate in Physical Chemistry, University of Chicago.

Grant Melvin Kloster, S.B., Associate in Physiological Chemistry, University of Chicago.

Eloise Parsons, A.B., Associate in Physiological Chemistry, University of Chicago.

Arthur John Atkinson, S.M., Associate in Pharmacology and Physiology, University of Chicago.

Leland Wilber Parr, Ph.D., Associate in Bacteriology, University of Chicago.

Harry Alvin Oberhelman, M.D., Associate in Pathology, Presbyterian Hospital.

Charles Otto Carlstrom, G.D., Associate in Kinesitherapy, 108 North State Street.

Jacob Myers, M.D., Associate in Surgery (Orthopedic), 104 South Michigan Boulevard.

Ralph W. Trimmer, M.D., Associate in Medicine, 132 North Oak Park Avenue, Oak Park, Illinois.

Elvin James Berkheiser, M.D., Associate in Surgery (Orthopedic), 7 West Madison Street.

John Alexander Gardiner, M.D., Associate in Medicine (Pediatrics), LaGrange, Illinois.

Stephen Pantelis Anthony, M.D., Associate in Medicine, 25 East Washington Street.

Harry J. Isaacs, M.D., Associate in Medicine, 5 South Wabash Avenue.

Aaron Elias Kanter, S.M., M.D., Associate in Obstetrics and Gynecology, 25 East Washington Street.

Herman Porter Davidson, M.D., Associate in Ophthalmology, 22 East Washington Street.

Daniel Allan MacPherson, S.M., Associate in Bacteriology, University of Chicago.

William John Frederick, S.M., Associate in Bacteriology, University of Chicago.

Jeannette Brown Obenchain, Ph.B., Research Assistant in Anatomy, University of Chicago.

Libbie Henrietta Hyman, Ph.D., Research Assistant in Zoölogy, University of Chicago.

Allan Funder Reith, A.B., Research Assistant in Bacteriology, University of Chicago.

Thomas Cottrell, M.D., Assistant in Surgery (Genito-urinary), 800 North Clark Street.

Walter Thomas Venn, M.D., Assistant in Surgery (Genito-urinary), 25 East Washington Street.

Charles M. Bacon, M.D., Assistant in Medicine (Pediatrics), 6802 Ridgeland Avenue.

Melbourne Clements, M.D., Assistant in Surgery (Genito-urinary), 25 East Washington Street.

Hillier L. Baker, M.D., Assistant in Surgery, 1711 West Garfield Boulevard.

Jay Ireland, M.D., Assistant in Surgery, 5412 North Clark Street.

Ernest Charles McGill, M.D., Assistant in Surgery, 1564 Sherman Avenue, Evanston, Illinois.

Thomas Hume Bissonnette, A.M., Assistant in Zoölogy, University of Chicago.

Leigh Hoadley, A.B., Assistant in Zoölogy, University of Chicago.

Harold Clifford Goldthorpe, S.B., Assistant in Physiological Chemistry, University of Chicago.

Ida Kraus, S.M., Assistant in Physiological Chemistry, University of Chicago.

Laird Sumner Van Dyck, S.B., Assistant in Pharmacology and Physiology, University of Chicago.

Nannie Virginia Thornton, A.B., A.M., Assistant in Chemistry, University of Chicago.

Edward Staunton West, A.B., Assistant in Chemistry, University of Chicago.

Henrietta Lydia Zollman, A.B., Assistant in Chemistry, University of Chicago.

Francis Arthur Jenkins, S.B., Assistant in Physical Chemistry, University of Chicago.

William Lamkin Ray, Ph.D., Assistant in Chemistry, University of Chicago.

Charles Chapman Snow, S.B., S.M., Assistant in Chemistry, University of Chicago.

Kenneth Hancock Goode, S.B., Assistant in Chemistry, University of Chicago.

William Gustav Friedemann, S.B., S.M., Assistant in Chemistry, University of Chicago.

Barclay Lincoln Jones, Ph.B., Assistant in Chemistry, University of Chicago.

Gladys Leavell, S.B., Assistant in Organic Chemistry, University of Chicago.

Clemmy Olin Miller, A.B., Assistant in Qualitative Analysis, University of Chicago.

Ruth Neuhausen, S.B., Assistant in General Chemistry, University of Chicago.

John Richard Sampey, S.B., S.M., Assistant in Organic Chemistry, University of Chicago.

Sarah Sheldon Tower, S.B., Assistant in Physiology, University of Chicago.

Theodore Elliott Boyd, S.B., Assistant in Physiology, University of Chicago.

Julius Blumenstock, S.B., S.M., Assistant in Physiology, University of Chicago.

Sol Litt, S.B., Assistant in Physiology, University of Chicago.

Kenneth Phillips, S.B., Assistant in Physiology, University of Chicago.

Janet Macfarlane Bourn, Ph.B., Assistant in Bacteriology, University of Chicago.

Harry Victor Hume, S.B., Assistant in Quantitative Analysis, University of Chicago.

William John Frederich, S.M., Assistant in Bacteriology, University of Chicago.

Meta Louise Schroeder, S.M., Fellow in Department of Anatomy, University of Chicago.

Malcolm D. Brode, A.B., Assistant in Zoölogy.

Harvey Darell Chase, A.M., Assistant in Zoölogy.

Robert W. Graham, M.D., Assistant in Medicine (Pediatrics), Aurora, Illinois.

Henry Clay Niblack, M.D., Assistant in Medicine (Pediatrics), 309 South Ashland Boulevard.

George Fred Sutherland, M.D., Ph.D., Assistant in Medicine (Pediatrics), 104 South Michigan Boulevard.

Proctor Cook Waldo, M.D., Assistant in Medicine (Pediatrics), 104 North Oak Park Avenue, Oak Park, Illinois.

George Fielding Hibbert, M.D., Assistant in Obstetrics and Gynecology, 6006 North Paulina Street.

Leon Wade Martin, M.D., Assistant in Obstetrics and Gynecology, 4142 Sheridan Road.

Henry Hoyt Cox, M.D., Assistant in Surgery, 6701 Stony Island Avenue.

Aldo K. Germann, M.D., Assistant in Obstetrics and Gynecology, 104 South Michigan Boulevard.

George Oliver Solem, M.D., Assistant in Medicine, 122 South Michigan Boulevard.

Emil George Vrtiak, M.D., Assistant in Medicine, 1610 West Chicago Avenue.

Lynn Rogers, M.D., Assistant in Medicine, 104 South Michigan Avenue.

William Balmer Knox, M.D., Assistant in Medicine, 7401 Madison Street, Forest Park, Illinois.

Kamil Schulhof, M.D., Assistant in Medicine, 19 North Crawford Avenue.

Grant Harrison Laing, M.D., Assistant in Medicine, 122 South Michigan Avenue.

LeRoy H. Sloan, M.D., Assistant in Medicine, 1428 East Sixty-seventh Place.

Russell C. Johnson, M.D., Assistant in Medicine, Berwyn, Illinois.

Frank Brazzil Kelly, M.D., Assistant in Medicine, 122 South Michigan Avenue.

Eugene Fagan Traut, M.D., Assistant in Medicine, 104 North Oak Park Avenue, Oak Park, Illinois.

Carl Wesley Apfelbach, M.D., Assistant in Medicine, Presbyterian Hospital.

Howard Martin Sheaff, M.D., Assistant in Medicine, 1507 Massasoit Avenue.

H. Walden Retan, M.D., Assistant in Medicine, 122 South Michigan Avenue.

George Morris Curtis, M.D., Assistant in Medicine (National Research Fellow), 4832 Vincennes Avenue.

Edward Julius Stieglitz, M.D., Assistant in Medicine (National Research Fellow), 615 East 61st Street.

Marion Ousley Cole, M.D., Assistant in Medicine, 1361 East 57th Street.

Frances Haines, M.D., Assistant in Surgery (Anesthetics), 25 East Washington Street.

Evelina W. Ehrmann, S.B., M.D., Assistant in Medicine (Pediatrics), 2059 West 21st Street.

Mary Gritzner Schroeder, M.D., Assistant in Medicine (Nervous and Mental Diseases), Winfield, Illinois.

Mary M. Lyons, M.D., Assistant in Surgery (Anesthetics), 5539 West Jackson Boulevard.

Edward Dudley Allen, M.D., Assistant in Obstetrics and Gynecology, 104 South Michigan Avenue.

Gerritt Cotts, M.D., Assistant in Obstetrics and Gynecology, 5036 Broadway.

James P. Fitzgerald, M.D., Assistant in Ophthalmology, 104 South Michigan Avenue.

William George Hibbs, M.D., *Dane Billings Memorial* Fellow in Medicine.

Francis Howe Straus, M.D., *Nicholas Senn* Fellow in Surgery.

———, *Thompson-Bevan* Fellow in Surgery.

William John Gallagher, M.D., *Francis A. Hardy* Fellow in Surgery.

Michael Higgins Ebert, M.D., Research Fellow in Dermatology, Hyde Memorial Fund.

Celestin B. Semerak, S.B., M.D., Fellow in Pathology, Rush Medical College.

Alice Kassie Hall, S.B., M.D., Stanton Abeles Friedberg Fellow and Assistant in Laryngology and Otology, 25 East Washington Street.

FELLOWS APPOINTED FOR 1923–24

(in the departments offering medical courses at the University of Chicago)

Mary Jane Brown, A.B., Zoölogy.

Chang-Kong Chuang, S.B., Chemistry.

Beals Ensign Litchfield French, S.B., Physiological Chemistry.

Rebekah Monaghan Gibbons, S.M., Physiology.

Percival Allen Gray, S.B., Anatomy.

William George Guy, B.S., Chemistry.

Albert Martinius Holmquist, S.M., Zoölogy.

Frederic T. Jung, S.B., Physiology.

Howard Roswald Moore, S.M., Chemistry.

John T. Myers, S.M., Bacteriology (Logan Fellow).

Walter Charles Russell, S.B., Chemistry (Swift Fellow).

Constancio Pacifico Rustia, S.B., Zoölogy.

Samuel Bradford Stone, S.B., Chemistry (Loewenthal Fellow).

Nannie Virginia Thornton, A.M., Chemistry (Edith Barnard Fellow).

Wilbur R. Tweedy, S.B., Physiological Chemistry.

EXTRA-MURAL FACULTY

at Chicago Isolation Hospital

Heman Spalding, M.D., Associate Clinical Professor of Medicine.

at St. Luke's Hospital

Lewis L. McArthur, M.D., Assistant Clinical Professor of Surgery.

at the Cook County Hospital

Daniel Eisendrath, M.D., Clinical Professor of Surgery.

Hugh McKenna, M.D., Assistant Professor of Surgery.

David C. Strauss, M.D., Assistant Professor of Surgery.

Roger Troop Vaughan, Assistant Professor of Surgery.

OFFICERS OF ADMINISTRATION

AT THE UNIVERSITY OF CHICAGO

Ernest DeWitt Burton, Acting President of the University, Harper Memorial Library, Room W11.
Harry Pratt Judson, President Emeritus of the University.
James Hayden Tufts, Dean of Faculties, Harper Memorial Library, Room M12.
Basil Coleman Hyatt Harvey, Dean of Medical Students, Cobb Hall, Room 7B.
Edgar Johnson Goodspeed, Secretary to the President, Harper Memorial Library, Room W11.
Walter A. Payne, University Recorder and Examiner, Cobb Lecture Hall, Room 5A.
Marion Talbot, Dean of Women, Cobb Lecture Hall, Room 16B.
Sophonisba Preston Breckinridge, Assistant Dean of Women, Cobb Lecture Hall, Room 16B.

AT RUSH MEDICAL COLLEGE

Frank Billings, Dean of the Faculty.
†John Milton Dodson, Dean of Students.
Ernest Edward Irons, Acting Dean of Students.
Oliver Samuel Ormsby, Secretary of the Faculty.
William Hamlin Wilder, Comptroller.
James H. Harper, Registrar.
Catharine A. McAuliff, Librarian.

THE ADMINISTRATIVE BOARD OF MEDICAL AFFAIRS

AT THE UNIVERSITY OF CHICAGO

The President, *Chairman*

The Recorder, *ex officio.*
Dean Basil Coleman Hyatt Harvey, *ex officio.*
Dean John William Edward Glattfeld, *ex officio.*
Dean Leon Carroll Marshall, *ex officio.*
Dean David Allan Robertson, *ex officio.*
Dean Marion Talbot, *ex officio.*
Professor Robert Russell Bensley.
Professor Frank Billings.
Professor Anton Julius Carlson.
Professor Charles Manning Child.
Professor Ludvig Hektoen.
Professor Charles Judson Herrick.
Professor Edwin Oakes Jordan.
Professor Fred Conrad Koch.
Professor Preston Kyes.
Professor Dean DeWitt Lewis.
Professor Frank Rattray Lillie.

† Absent on leave.

Professor Arno Benedict Luckhardt.
Professor William Darnall MacClintock.
Professor Alexander A. Maximow.
Professor Horatio Hackett Newman.
Professor Julius Stieglitz.
Professor Elizabeth Wallace.
Professor Harry Gideon Wells.
Professorial Lecturer Arthur Dean Bevan.
Professorial Lecturer John Milton Dodson.
Associate Professor George William Bartelmez.
Associate Professor John Casson Geiger.
Associate Professor David Judson Lingle.
Associate Professor John Foote Norton.
Associate Professor Dudley Billings Reed.
Associate Professor Warder Clyde Allee.
Associate Professor Esmond Ray Long.
Assistant Professor Albert W. Bellamy.
Assistant Professor Clark Owen Melick.
Assistant Professor Fred Merrifield.
Assistant Professor Carl R. Moore.
Assistant Professor Charles Henry Swift.
Assistant Professor Arthur Lawrie Tatum.
Dr. Kenneth Fowler.
Dr. Marion Hines-Loeb.
Dr. Martin Edward Hanke.
Dr. Benjamin H. Willier.
Dr. Willis Eugene Gouwens.
Mr. Noel Paul Hudson.
Mr. Grant Melvin Kloster.
Miss Eloise Parsons.
Mr. Arthur John Atkinson.
Dr. Leland Wilbur Parr.
Dr. Sarah Elizabeth Branham.
Mr. Patrick Arthur Delaney.
Dr. Daniel Bartlett MacCallum.
Mr. Theophil Paul Grauer.
Mr. William Alfred Starin.

INTRODUCTORY STATEMENT

FRESHMAN AND SOPHOMORE CLASSES ARE LIMITED TO 100 IN EACH CLASS; THE JUNIOR AND SENIOR CLASSES TO 130 IN EACH CLASS. NO APPLICATION FOR ADMISSION TO THE AUTUMN QUARTER WILL BE RECEIVED AFTER AUGUST 1, 1923, FOR THE FRESHMAN CLASS, AND JUNE 1, 1923, FOR THE JUNIOR CLASS.

The student *must* commence the medical curriculum with the Autumn or Spring Quarter in order to pursue the medical courses in proper sequence.

Changes in rules and regulations.—The right is reserved by the Faculty to make changes at any time in requirements for admission, curriculum, fees, or any rules and regulations.

The curriculum.—The curriculum of Rush Medical College, extending over five annual sessions of nine months (three quarters) each, embraces (1) two years of work in the fundamental branches of Anatomy, both gross and microscopic, Neurology, Embryology, Physiology, Physiological Chemistry, Pharmacology, Hygiene and Bacteriology, and Pathology; (2) two years in the clinical branches of Materia Medica, Therapeutics, Clinical Pathology, Medicine, Surgery, Obstetrics, and the special lines of practice; and A FIFTH INTERNE OR ADVANCED WORK YEAR.[1]

The work of this fifth year will consist of:

A. An interneship in a hospital approved by the Faculty and taken under conditions prescribed by the Faculty, or

B. Advanced work as a Fellow or Research Student in one of the departments of the College, *including clinical work*, with the presentation of a dissertation embodying original work.

Fundamental branches of the University of Chicago.—The courses in the fundamental branches are offered only at the University of Chicago, in the spacious Hull Biological Laboratories, by instructors whose time is wholly devoted to teaching and investigation in their respective lines. It is believed that the student pursuing these studies in the atmosphere of an institution devoted to scientific work cannot but gain a broader and more thorough conception of these sciences. Such a training will not only afford a better preparation for the clinical courses of the Medical College and for the practice of medicine and surgery, but will also enable the student to follow more easily in the paths along which medical advances are being made and to apply these new discoveries in his daily work.

The clinical branches are taught at Rush Medical College, with its Central Free Dispensary, the Presbyterian Hospital, the Home for Destitute Crippled Children, the Cook County Hospital, the Durand Hospital of the John McCormick Institute for Infectious Diseases, and other hospitals in the vicinity of the College.

The requirements for admission comprise (*a*) the completion of a four-year high-school course, and, in addition, (*b*) three years of work in a recognized college or university.

[1] *From 1905 to 1914, this fifth year was offered as an optional year, leading to the degree of Doctor in Medicine, "Cum Laude." The increasing demand for internes has made it possible for every graduate of Rush Medical College to secure such a position in a first-class hospital. For regulations governing the interne year, see pp. 43–45.*

No person should enter upon the study of medicine with a preparation less thorough and comprehensive than that demanded by these minimum requirements. *Every student should complete a four-year college course, including the physics chemistry, and biology above mentioned, before entering the Medical School, if his age and other circumstances make it possible for him so to do.* This additional college work should secure for him a greater breadth of culture and a catholicity of interest which will make him a man of larger power, influence and usefulness in the community.

Admission to advanced standing.—Students or graduates of other medical colleges whose work is recognized by this College may be admitted to advanced standing (see p. 35).

Requirements for graduation.—The minimum requirements for graduation comprise attendance upon four sessions of three quarters (nine months) each, the completion of a prescribed amount of work, the passing of certain examinations both written and practical, and the successful completion of the fifth year (see p. 43).

The combined course for the degree of M.D. and S.B., A.B., or Ph.B.—Attention is called to the fact that courses are offered in the University of Chicago in the Departments of Arts, Literature, and Science, in all the branches of a liberal education (see p. 29).

Higher degrees.—A Master's degree or the degree of Ph.D. may be secured by special work in the medical sciences, and additional residence, in conformity with the regulations of the University covering such degrees.

The elective system.—The work of the medical curriculum is, in part, elective, the choice of the student for each quarter being subject to certain restrictions (see paragraph 4, p. 41).

The quarter system.—The College is in session during four quarters each year, but *students beginning their medical work must commence with the Autumn or Spring Quarter* (see p. 39).

The tuition fee is eighty dollars per quarter, or two hundred and forty dollars for each of the four annual sessions, this tuition including all laboratory fees (see pp. 37–38).

Student self-help.—Many opportunities are afforded in Chicago for students to earn a portion (and in exceptional cases the whole) of their expenses. A booklet giving fuller information in regard to this matter will be mailed on application.

GENERAL REGULATIONS

Students are admitted to the Medical Courses as medical students (of Rush Medical College), and also, by the same matriculation and fee, as (1) *undergraduate students* (candidates for a Bachelor's degree, S.B., A.B., or Ph.B.) or (2) *graduate students.* (*Graduates* of the University of Chicago, or of other universities or colleges of good standing, are admitted to the Medical Courses as graduate students; they are allowed all the privileges of the members of the Graduate Schools of the University.) In addition to students in regular standing, provision is made for the admission to the University of undergraduate students not seeking degrees. Such students are known as *unclassified students.* They may register for medical subjects, *but they are not candidates for any degree.*

1. *Admission.*—(*a*) Each student must present to the Faculty a certificate of good moral character, signed by at least two physicians of good standing in the state in which the applicant last resided. Space is provided for this purpose on the Application Blank. (*b*) He must be able to comply with the requirements for admission to the Medical Courses of the University of Chicago (see pp. 26–29). In brief, they consist of a four-year high-school course plus three years of college work, which must have included Latin, if not taken in high school, English, Trigonometry, College Physics, Chemistry, and Zoölogy, and a reading knowledge of French or German. (*c*) He will matriculate and register as a student of Rush Medical College as well as of the University at the beginning of his medical course. Such matriculation and registration are accomplished at the University without extra fee.

2. *Medical Courses as undergraduate work in the course for a Bachelor's degree.*—(*a*) The first year's work in Medicine may be taken as the fourth year of the Bachelor of Science course, or, in very large part, of the course for the degree of A.B. or Ph.B. (For requirements see p. 33). Students who wish to enter college and prepare to take the medical work as part of their Baccalaureate course may enter at the beginning of the Junior College course (first college year or at any further stage of advancement).[1] (*b*) Each student must comply with 1(*a*). (*c*) In order to comply with the rules of the medical examining boards of several states, a student will matriculate with the Dean of Rush Medical College (at the University) at the beginning of his work in Medicine and will consult with the Dean of Medical Students each quarter in regard to his work, and take a card of advice to the Dean in the College of Science, with whom the student will continue to register until he receives a Bachelor's degree. *Credit will not be given toward the M.D. degree unless the student complies with this regulation.*

3. *Admission as a graduate student.*—(*a*) Admission to the Graduate Schools of the University is granted (1) to those who have been graduated from the Colleges of the University of Chicago with the degree A.B., Ph.B., or S.B.; (2) to those holding Baccalaureate degrees from other institutions of good standing. (*b*) Such students should present their diplomas or other evidence of graduation from a standard college at the office of the Dean of the Graduate Schools. Inquiry regarding eligibility for admission to the Graduate Schools (stating degree and date, and institution conferring it) should be made of the University Examiner in advance. (*c*) A graduate student taking the Medical Courses must comply with 1 above. He will consult each quarter with the Dean of Medical Students, and will take a card of advice from him to the Dean of the Graduate School, with whom the student will register. *Credit will not be given toward the M.D. degree unless the student complies with this regulation.* (*d*) Advanced standing in the Medical Courses is granted for work done in other medical schools according to the conditions stated on page 35 of this *Circular.*

4. *Unclassified students.*—Persons at least twenty-one (21) years of age not seeking a degree may be admitted, through the office of the University Examiner,

[1] A student desiring to enter the course as a candidate for the S.B., A.B., or Ph.B. degree is requested to write the University Examiner, University of Chicago, Chicago, Ill.

to the courses of instruction offered in the University, as unclassified students, on the following conditions:

1. They shall present (*a*) credentials showing the completion of work equivalent to the admission requirements of the Colleges, or (*b*) evidence of successful experience as a teacher or other valuable educative experience in practical life.

2. Each applicant shall present by certificate or examination evidence of training in English at least equivalent to the entrance requirements of the Colleges in that subject. This requirement may be waived in the case of foreign students of ability who have a sufficient knowledge of the English language to profit by the instruction offered.

3. They shall give satisfactory reason for not classifying and becoming candidates for degrees.

4. They enter the University for the purpose of making a study of a definite subject or group of subjects for which adequate preparation has been received. In case of doubt as to the applicant's ability to pursue successfully the work desired, the approval of the instructor to whose courses admission is sought, or of an official representative of the department concerned, will be required.

5. They may not register for elementary courses only, i.e., courses intended for first-year college students.

6. They are subject to the general regulations pertaining to other undergraduates, including attendance at Chapel Assembly and, unless excused by the Dean, work in Physical Culture.

7. They are ineligible for public appearance.

NOTE.—Students entering the University for the first time should make it a point to complete all arrangements for entrance, either by correspondence or in person, *at least two weeks before the opening of the quarter.*

REQUIREMENTS FOR ADMISSION TO THE MEDICAL COLLEGE

These comprise as a minimum (*A*) the successful completion of a four-year high-school or academy course, qualifying the student to enter the Junior College (Freshman class) of the University of Chicago, (*B*) 27 majors (=9 quarters) of the usual college course, or a full equivalent therefor, (*C*) sustaining an average of 2½ grade-points per major in premedical college work, and (*D*) passing a satisfactory physical examination. He may be required to pass a psychological or general intelligence test.

A. HIGH-SCHOOL WORK REQUIRED FOR ADMISSION TO THE JUNIOR-COLLEGE (FRESHMAN CLASS), UNIVERSITY OF CHICAGO[1]

A student must offer for admission 15 units[2] of credit by examination or by certificate from an approved school from which he has graduated with an average grade higher than the pass mark of the school by at least 25 per cent of the

[1] A complete and more detailed statement of the requirements and the ground covered by each subject will be sent to any principal, teacher, or student on application to the Dean of Medical Students.

[2] A *unit* corresponds to a daily recitation of 45 minutes throughout the school year of thirty-six weeks.

difference between that mark and 100. Among these must be (*a*) 3 units of English, (*b*) a "principal group" of 3 or more units, and (*c*) a "secondary group" of 2 or more units. Of the 15 units 7 must be selected from the subjects named in the groups designated below; 5 may be selected from any secondary-school subjects for which credit toward graduation is given by the approved school from which the student receives his diploma.

The principal and secondary groups offered may be selected from the following: (1) Greek, (2) Latin, (3) a modern language other than English, (4) History, Civics, Commercial Law, and Economics, (5) Mathematics, (6) Physics, Chemistry, Botany, Zoölogy, General Biology, General Science, Commercial Geography, Physiology, Physiography, Geology, Astronomy. To form a language group the units must be all in one language. In other groups any combination of subjects may be made. Credit is not given for less than 1 unit each in Algebra, Plane Geometry, Physics, Chemistry, or a language. In Latin 2 units must be offered if the subject is to be continued in college. Less than ½ unit in any subject is not accepted.

SUMMARY OF ADMISSION REQUIREMENTS

3 units of English.

3 (or more) units in a single group, 1–6.

2 (or more) units in another single group, 1–6.

2 (or less) units in subjects selected from any of the groups 1–6.

[Total 10 units in English and groups 1–6.]

5 units selected from any secondary-school subjects accepted by an approved school for its diploma.

Entrance with conditions is not permitted.

Students intending to study medicine are strongly advised to take in the high school 2 units of Latin (Elementary Grammar and Caesar), 3 units of German or French, 1 unit each of Chemistry and Physics—with laboratory work. If these branches have not been taken in the high school, they must be taken as part of the college work required for admission (see section B, pp. 27–28). One-half unit of Trigonometry is strongly advised. A diploma is not accepted as sufficient evidence of such preparation, but specific statement is required as to the amount and character of the work in each branch of study. Blanks for the presentation of such credits will be mailed on application to the University Examiner.

TIME OF PREPARATION—ADMISSION UNITS

Preparation for admission to a Junior College is expected to cover a period of four years in a secondary school (high school or academy) of high grade. Admission credits are reckoned in units. A unit is a course of study comprising not less than 120 clock hours of prepared work. Two hours of laboratory work are regarded as the equivalent of one hour of prepared work.

METHODS OF ADMISSION

Admission to the Junior Colleges of the University may be obtained by one of the following methods: by certificate, by examination, or by a combination of the two methods.

1. *Admission by certificate.*—Students who present credentials showing graduation from any of the following schools and whose course of study covers

the entrance requirements indicated above will, upon the recommendation of their respective principals, be admitted without examination: (1) the accredited[1] schools of the University including (*a*) schools accredited by the North Central Association of Secondary Schools and Colleges; (*b*) schools approved by the Board of Admissions after inspection by official representatives of the University; (2) schools accredited by the New England College Entrance Certificate Board; (3) schools outside the territory of the associations above mentioned but accredited by a leading state university whose standards of admission are substantially the same as those of the University of Chicago. The University reserves the right to refuse admission to any student whose preparatory work was of such grade as to create serious doubt of his ability to pursue college work successfully.

2. *Admission by examination.*—Regular entrance examinations are held twice each year, in June and in September, the June examinations being those of the College Entrance Examination Board. The candidate may, at his option, take his examinations at different times, provided that no examination is valid after three years from the date when taken and that no student shall be admitted to examination at more than three regular periods. Students who present by certificate less than 15 units from an accredited school may complete the requirements for admission by examination.

a) *The June examinations.*—The examinations held by the College Entrance Examination Board in June of each year will be accepted as a satisfactory substitute for the admission examinations held by the University of Chicago. The board's examination this year will be held during the week June 18–23 and the corresponding week of the following year.

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N.Y., and must be made upon a blank form to be obtained from the secretary of the board upon application.

b) *The September examinations.*—The September examinations are held at the University. Those for 1923 will be held September 10–14. Applications for admission to these examinations should be made to the University Examiner at least thirty days in advance. Each applicant will pay in advance an examination fee of $5.00. The University Cashier's receipt for this fee entitles the student to admission to examination in as many subjects as he wishes to take at one time.

c) *Special examinations.*—Students seeking admission at the beginning of the Winter or Spring Quarter may, upon application to the University Examiner at least thirty days in advance, arrange for special examination in subjects in which they are deficient. For admission to such special examination a fee of $5.00 is charged.

B. COLLEGE WORK REQUIRED FOR ADMISSION TO THE MEDICAL COURSES

Twenty-seven majors (three years) of college work must have been taken, and this work must have included the following branches:

(1) Chemistry—(*a*) 3 majors of Inorganic Chemistry (or 2 majors if 1 unit of high-school Chemistry with laboratory work has been taken); (*b*) 1 major of

[1] The continuation of any school on the accredited list of the University will depend upon the records made in the University by its graduates admitted on certificate.

Organic Chemistry; (*c*) 1 major of Qualitative Analysis. This work in Chemistry corresponds to the courses Chemistry 1, 2, 3, 4, and 6 (see pp. 65–66). The student is strongly advised to take Quantitative Analysis and additional Organic Chemistry.

(2) Physics—4 or 5 majors of Physics (or 2 or 3 majors if 1 unit of high-school Physics has been taken). This work in Physics corresponds to the courses Physics 1, 2, 3, 4, and 5, or 1, 2, 3S, and 4S, with Trigonometry.

(3) 2 majors of General Biology (Zoölogy 1 and Zoölogy 17), Plant Physiology is recommended.

(4) A reading knowledge of German or of French (ordinarily 2 units of high-school or 4 majors of college work). This knowledge is determined by an efficiency test given, for 1923–24, about November 24.

(5) 2 majors of Latin (Elementary and Comparative Grammar) unless 1 unit has been completed in high school.

7. English—2 majors of college composition. This work corresponds to courses 1 and 3 in the English Department, University of Chicago, which are strictly courses in writing. English 1, for first-year students, requires at least twenty-four papers of over five hundred words each, class themes, and a lengthy term paper based on library work. English 3, offered in any quarter of the second year in residence, is devoted largely to argumentative and expository writing, with a somewhat larger quantitative requirement than English 1. Both are required of all candidates for a Bachelor's degree. Students bringing from another standard institution a credit of six or more semester hours for work in composition somewhat different from that outlined above may, after examination, be exempted by the Departmental Examiner in English from further training in composition.

Every student who is considering the question of entering upon the study of medicine is requested to write to the Dean of Medical Students for a blank application for admission, to fill out the same carefully, giving full details of his high-school and college work, and to mail the application, thus completed, to the Dean. He will be informed as promptly as possible as to just what credit he can be given, and in what, if any, branches he is deficient. This will make it unnecessary for the student to estimate closely his own credits, and will secure for him a prompt and definite reply to his inquiry concerning his preparation for the study of medicine.

The physical examination is conducted by the University Health Officer, and assistants.

C. REQUIREMENTS FOR THE COMBINED COURSE FOR THE DEGREES OF S.B. AND M.D.

The college preparation for the Medical Courses may be accomplished at the University of Chicago in nine quarters. A student is not admitted to the Medical Course with any deficiency in premedical work, unless he has an equivalent amount of advanced standing in the medical curriculum (e.g., histology or embryology). *In this case the deficiency must be removed before he can enter upon the work of the second year of the Medical Courses.*

Attention is called to the fact that any credits which may be required in addition to high-school work may be secured in the Colleges of Arts, Literature, and Science of the University of Chicago by attendance during extra quarters before entering the Medical Courses. Students deficient in premedical work are urgently advised to enter the University for the Spring or Summer Quarter, in order

to make up deficiencies. Credit will be accepted for such work done in any other college or university of equal standing.

Students seeking a Bachelor's degree (A.B., Ph.B., or S.B.) from the University of Chicago, in connection with the degree of M.D. from Rush Medical College, must comply with the established regulations of the University prescribed for the courses leading to such degrees. As the fundamental branches of the medical curriculum are taught in the University, the student may combine the course for a Bachelor's degree with that for the Medical degree, electing as science courses those offered in the Departments of Anatomy, Physiology, etc., which are also courses in the medical curriculum. The prescribed work for these degrees is indicated on page 33.

While it is thus possible for one to secure a Bachelor's degree and the degree of M.D. in from seven to eight years, every student should secure a more thorough and comprehensive collegiate preparation if it is possible for him to do so. For students taking this broader course the following subjects are recommended as of especial value in preparation for medical study: Greek, 3 majors; Calculus, 1 major; Elementary Botany, 1 major; Elementary Plant Physiology, 1 major; Zoölogy, 3 majors; Introductory Physiology, 1 major; Physical Chemistry, 1 major; Quantitative Chemical Analysis, 1 major; advanced Organic Chemistry, at least 2 majors; Physiography, 1 major; Psychology, 2 to 4 majors.

GENERAL INFORMATION FOR STUDENTS ENTERING THE FRESHMAN AND SOPHOMORE CLASSES

ROUTINE OF ENTRANCE

I. CREDENTIALS

Applications should be addressed to The University of Chicago, Chicago, Ill. When presenting himself for admission to the University, the student should bring his *admission credits*, if he is entering a Junior College at its beginning; his *letter of dismissal* and an official statement concerning his previous work, if he is entering with advanced standing from another institution; and a *diploma*, if he is applying for admission to a Graduate School.

These documents should be presented at the office of the Examiner, Cobb Hall. Detailed directions will be furnished in the Examiner's office as to the mode of matriculating and registering for courses of instruction desired.

II. MATRICULATION AND REGISTRATION

1. *Time of Registration.*—(*a*) Students in residence will register on the days announced on the bulletin boards and in the *Weekly Calendar*. (*b*) Students entering the University for the first time, or resuming work after absence for a quarter, will register on the first day of the quarter.

2. *Order of procedure for new students.*—New undergraduate students will: (*a*) In case they come from a secondary school or another college present credentials to the University Examiner and secure a certificate of admission and a *Course Book*. This should be done by correspondence. New students are urged to send their credentials to the Examiner at least two weeks before they come to

register. (*b*) Matriculate in the office of the Dean of the School or College to which admission is desired. Matriculation is granted on presentation of the proper credentials which entitle the student to enter the University. As evidence of admission the student is given a *matriculation card.* This card should be retained under all circumstances, as it must be shown whenever membership in the University is to be demonstrated. (*c*) Register in the same office for the courses of study desired for the ensuing quarter. For this purpose the student will be given a *registration card* for the quarter, on which the courses desired will be entered and if approved, authorized by the Dean. (*d*) Pay the University fees for the ensuing quarter. In order to do this, the student will present the matriculation card and the proper registration card at the office of the Cashier, Press Building, Room 1. On payment of fees the Cashier will stamp the matriculation card and return it to the student, together with a receipt for tuition fees and for laboratory fees (if any).

Tuition and other fees may conveniently be paid by check to the order of the University of Chicago. Details as to fees will be found below.

The names of the students will be sent to instructors as entitled to attend classes *only after the fees have been paid,* as above specified.

Graduate students follow the procedure above but report to the Dean of the Ogden Graduate School of Science instead of to the University Examiner.

FEES FOR MATRICULATION, TUITION, DEPOSITS, AND APPARATUS

1. *Matriculation fee.*—(*a*) The matriculation fee is $10.00, and is required of every student on entrance to the University. It is payable but once. (*b*) A medical student will also matriculate as a student of Rush Medical College. No extra fee is charged, and the matriculation is good for the complete Medical Course, including the clinical years. (*c*) An undergraduate student, candidate for a Bachelor's degree, who wishes to take the Medical Courses as a part of the work for the Bachelor's degree will matriculate also as a student of Rush Medical College at the beginning of the first year of his work in the Medical Courses. No extra fee is charged, and the matriculation is good for the complete Medical Course, including the clinical years.

NOTE.—Matriculation for Rush Medical College can be accomplished at the University through the Dean of Medical Students.

2. *Tuition fee.*—(*a*) The tuition fee for the Medical Courses (3 to 3½ majors each quarter) is $80.00 per quarter, including laboratory fees.

Under the medical-practice acts and the rules of the medical examining boards of most of the states of this country, an applicant for a license to practice must have attended at least four annual sessions in a recognized medical school. Therefore a student taking the Medical Courses with a view to procuring the degree of M.D. must matriculate *as a medical student* at least fifty-two months before the date of his expected graduation in medicine. From the date of such matriculation he is required to pay the tuition fee for the Medical Courses, whether he is registered as a Senior College student, a graduate student, or otherwise.

In order that a graduate student or Senior College student may have his work counted toward the M.D. degree, he must be matriculated as a student of Rush Medical College and must each quarter secure from the Dean of Medical

Students a card of advice as to registration, and must present this card to his own Dean on registering with him.

NOTE.—A student who is taking the Medical Courses with no intention of securing the medical degree may, if he prefers, pay the usual University fee of $75.00 per quarter, with additional laboratory fees as follows:

In Chemistry and all Biological Laboratory courses, $6.00 for a major course and $3.00 for a minor course.

Students taking courses prerequisite for admission to the Medical Courses should consult the *Circular of Information* for the Biological Departments.

(*b*) Students taking two majors only will pay $26.67 per major. (*c*) All tuition and laboratory fees are due and payable on or before the *first* day of *each quarter*. All fees are payable to the Cashier, Press Building, Room 1.

Registration is not complete until all University bills are paid. Those who fail to meet this obligation within the first five days of the quarter are not regarded as members of the University. After the fifth day, to secure membership in the University, the consent of the Dean and the payment of a fee of $5.00 for late registration will be required.

3. *Laboratory apparatus and supplies.*—(*a*) A compound microscope is required for most of the Medical Courses. Every student is strongly advised to purchase a good microscope, with an immersion lens, in order that he may become familiar with the same instrument which he will use after his graduation. Students not possessing a microscope may rent one from the Laboratory Supply Department at a cost of $2.00 per quarter for a compound microscope and $1.50 additional for an immersion lens. (*b*) All students taking courses in the Department of Physical Culture are required to provide themselves with a gymnasium suit for use in the gymnasium. The cost of such a suit is about $4.00. (*c*) Every student taking a course in the Department of Chemistry is required to obtain and deposit with the Curator a $5.00 coupon ticket to be used in the purchase of necessary apparatus and materials for the laboratory work. A new coupon ticket must be deposited on request of the Curator when materials used and breakage make the replenishment of the deposit necessary, balance of $2.50 being required at all times. No charges are made against these tickets without the knowledge of the student, and the unexpended balance is refunded to the student when he leaves the Department. (*d*) A student taking a course in any of the biological departments is required to obtain a $5.00 coupon ticket for the purchase of apparatus used and materials required in the course. When more than one biological course is taken, a coupon ticket for $10.00 must be purchased by the student. Such coupon ticket must be surrendered and refund of balance due claimed at the end of each quarter, and new coupon ticket be purchased for the succeeding quarter. If, during the quarter, the balance for a single course is reduced to $1.00 or, for more than one course, to $2.00, further deposit of a $5.00 coupon ticket will be demanded by the Laboratory Supply Department. The balance mentioned is intended to serve as a deposit against avoidable loss, breakage, or damage in the laboratories. Each student will be charged for damage or loss for which he is individually responsible and for his pro rata share of damage or loss the responsibility for which cannot be individually located. The unexpended balance of each biological coupon ticket is refunded to the student shortly after the end of the quarter. (*e*) In addition to the above-mentioned tickets, students registered for courses in Physiology and Physiological Chemistry are required to provide themselves with special supply and breakage tickets, a

$5.00 ticket for each course. (*f*) A student may procure a skeleton from the Osteological Laboratory on payment of a deposit of $24.00 for the same, or part of a skeleton on payment of a deposit of $12.00. The deposit will be refunded when the skeleton (or part) is returned uninjured. The necessary textbooks may be purchased at the University of Chicago Bookstore in Ellis Hall.

ROOMS, BOARD, AND GENERAL EXPENSES

The University has thirteen residence halls for students, eight for women and five for men. Rooms in these halls rent for from $30 to $75 a quarter. The rental covers charges for heat, light, and care, except that in Drexel House the rooms are cared for by the students themselves. Rooms are for the most part single, but a few in each Hall may be occupied by two students. Application for rooms should be made to the University Cashier, who will, on request, send a diagram of the Halls showing prices of rooms. Each room is furnished with study-table, chairs, bookcase, dresser, mirror, chamber-ware, rug, bedstead, mattress, and bedding, with the exception that in Hitchcock Hall rugs are furnished by the students and in Drexel House bedding is furnished by the students. Towels must be furnished by the students. Rooms may not be subrented, nor can exchange or transfer of rooms be made except by permission of the Cashier.

A University House is organized in each Hall; each House has a Head, appointed by the President of the University, and a House Committee, elected by the members; also a House Counselor, selected from the Faculties of the University by the members of the House. The membership of the House is determined by election, and each House is self-governing under the general control of the University.

Six of the halls for women (Beecher, Kelly, Foster, Green, Greenwood, and Kenwood) have separate dining-rooms and parlors. The cost of board in these halls is $7.00 per week and board for the entire quarter is payable in advance on the opening day. All students living in these halls are required to take their meals there.

The table below furnishes an estimate of the annual expenses, exclusive of tuition and laboratory fees, for thirty-six weeks, of a student in the University residing within the quadrangles.

	Lowest	Average	Liberal
Rent and care of room	$ 90.00	$144.00	$288.00
Board	231.00	270.00	330.00
Laundry	45.00	60.00	75.00
Textbooks and stationery	30.00	51.00	72.00
Incidentals	45.00	75.00	120.00
Total	$441.00	$600.00	$885.00

An opportunity to share in co-operative housekeeping and thereby to reduce living expenses somewhat is offered at Drexel House, which accommodates sixteen women students who share in the preparation of meals and the care of the House. Room rent for each student is $36.00 a quarter, and the co-operative plan makes the cost of table board considerably less than is possible under other circumstances. Some experience in housekeeping and adaptability to group life are necessary. Correspondence with reference to rooms in Drexel House should be addressed to the Director of the Housing Bureau.

The University of Chicago maintains its Housing Bureau in order to assist students in finding the best accommodations obtainable in the University neighborhood. All rooms listed have been inspected and certain standards are maintained. Rooms on small inclosed courts are not listed, and all householders registered must rent exclusively to men, or exclusively to women. The use of a reception room at least two evenings a week must be provided for women students. Students are asked to co-operate by insisting on these requirements even if they do not engage their rooms through the Housing Bureau.

Upon arrival at the University, students should apply at once to the Housing Bureau for a list of rooms. Incoming students are especially cautioned against strangers who approach them at the station or on the streets and offer their services in securing rooms.

Students may secure furnished rooms in the neighborhood of the University at prices ranging from $60.00 to $150.00 a quarter, and take their meals at the University or at nearby restaurants. Men occasionally find small rooms or dark rooms for less than $50.00 a quarter, but women usually have to pay $60.00 or more. Not less than $7.00 a week should be allowed for table board, and one can seldom find a room with outside light, drop light, study table, ample closet space, and a comfortable bed for less than $72.00 a quarter.

Desirable furnished rooms for light housekeeping are difficult to find. They range in price from $35.00 to $75.00 a month. The so-called kitchenettes in buildings in the vicinity of the University are small, usually dark, rooms with a kitchen table and gas plate, but never with running water. Rooms with kitchen privileges may be secured at the regular room rates with an additional charge of about $12.00 per quarter.

Furnished houses or apartments of from four to ten rooms vary in price from $60.00 to $150.00 per month. In the University neighborhood there are very few two- or three-room apartments and their rental, unfurnished, is $60.00 a month or more. The Housing Bureau lists only furnished houses and apartments.

Lists of rooms may be obtained at the office, Room 1, Press Building, about one week before the opening of each quarter. Lists should be obtained in person at this office. Renting by mail is not satisfactory and students are advised against it.

Board at the University may be obtained at Hutchinson Commons, the Ida Noyes refectory, and the Emmons Blaine lunch-room. Cafeteria service is provided, the cost of meals averaging about $7.00 per week.

TOTAL REQUIREMENTS FOR THE BACCALAUREATE DEGREES

COLLEGE COURSES

College courses, with few exceptions, are given as "majors," one exercise daily throughout a quarter. Three majors and the required work in Physical Culture constitute full work for a quarter. In comparison with admission credits two majors are reckoned as equal to one unit.

REQUIREMENTS IN THE JUNIOR COLLEGES

During his first two years the student is required to take:

1. Two majors of English (courses 1 and 3). English 1 must be taken in the first quarter of residence.

2. A "continuation group" of three consecutive majors, taken during the first year, which continues the work of either his principal or secondary admission group or of a subject in which he took one unit in the Senior year of high school. Careful consideration should be given to the choice of these courses.

3. Enough majors in each of the following "distribution groups" to make his total (high-school+college) credit in each group 4 majors (=2 units).

I. Philosophy, History, and Social Science: Departments of Philosophy, Psychology, Education, Political Economy, Political Science, History, History of Art, and Sociology and Anthropology.

II. Foreign Language (all 4 majors in one language): Departments of Greek Language and Literature, Latin Language and Literature, Romance Languages and Literatures, Germanic Languages and Literatures. Work in any other modern language credited toward the Bachelor's degree of the University may be accepted in satisfaction of the foreign language requirement on approval of the Standing Committee on Foreign Language Requirement, consisting of the dean of the college, the Departmental Examiner of the cognate department in the University, and the University Recorder and Examiner.

III. Mathematics: Department of Mathematics.

IV. Science: Departments of Astronomy and Astrophysics, Physics, Chemistry, Geology and Paleontology, Geography, Zoölogy, Anatomy, Physiology, Physiological Chemistry and Pharmacology, Botany, Pathology, and Hygiene and Bacteriology.

REQUIREMENTS FOR A BACHELOR'S DEGREE

The Bachelor's degree is conferred when the student has completed 36 majors and obtained at least 72 grade-points, exclusive of required work in Physical Culture.[1] These 36 majors shall include one principal sequence of at least 9 coherent and progressive majors taken in one department or in a group of departments and one secondary sequence of at least 6 majors selected from a different department or group of departments. These sequences must have the approval of the Dean. The courses in medicine may be counted in satisfaction of the principal sequence and six majors selected, with the approval of the Dean, from the science courses prerequisite to medicine may be counted in satisfaction of the secondary sequence. Attention is called to the requirement that courses accepted in satisfaction of either sequence must each carry a grade of C or higher.

The degree of A.B. is conferred when the principal sequence consists of 11 majors of Latin and 9 majors of Greek (7 if all are taken in the University), including entrance work. A secondary sequence of 6 majors is also required.

The degree of Ph.B. is conferred when the principal sequence has been taken in the Departments of Philosophy, Social Sciences, Language, or Literature.

The degree of S.B. is conferred when the principal sequence has been taken in the Departments of Mathematics or Science.

[1] The marking system is fully explained in the *Undergraduate Course Book*, which is issued to each student.

Mathematics may at the option of the student be used as the principal department for the degree of either Ph.B. or S.B.

No course which is not completed with a grade of C or better will be counted in any sequence.

At least 12 of the 36 college majors must be courses designated as Senior College courses, or as graduate courses to which undergraduates are admitted.

THE CURRICULUM

1. *The fundamental medical branches.*—The course for the first two years' work in Medicine consists mainly of instruction in the fundamental medical sciences. It includes the following courses:

a) *Anatomy*, 6½ majors as follows: Human Anatomy (Dissecting) 3½ majors (1, 2, 3, 4)[1]; Splanchnology, Histology, and Cytology, 1 major (10); Embryology, 1 major (Zoölogy 20); Neurology, 1 major (Anatomy 17).

b) *Physiology*
c) *Physiological Chemistry and Pharmacology* } 6 majors as follows: Physiology, 3 majors (12, 13, 14); Physiological Chemistry, 2 majors (19 and 20); Pharmacology, 1 major (21).

d) *Pathology*, 2 majors as follows: Pathology (1, 2).

e) *Hygiene and Bacteriology*, 1½ majors as follows: Bacteriology (2B).

f) 2 additional majors in any department or departments of the students' choice, approved by the Faculty.

A total of 18 majors.[2] All this work is given at the University of Chicago.

2. *The clinical medical branches.*—The work of the two clinical years comprises the following branches: (*a*) Materia Medica, Therapeutics, and Medical Jurisprudence, at least 2 majors; (*b*) Pathology, at least 1 major; (*c*) Medicine, at least 6 majors; (*d*) Surgery, at least 5 majors; (*e*) Obstetrics and Gynecology, at least 3 majors; (*f*) Laryngology and Otology, at least 1.2 majors; (*g*) Ophthalmology, at least .8 major; (*h*) Skin and Venereal Diseases, at least 1 major; (*i*) additional work in any branch, or branches, of the student's choice, at least 2 majors; a total of 22 majors.

ADMISSION TO ADVANCED STANDING IN THE MEDICAL COURSES

Students are admitted to advanced standing in Rush Medical College as follows:

Students from other medical schools whose standards are fully equivalent to to those of this institution may receive credit for time spent—estimated in months—and for work successfully completed in such institutions, provided it is equivalent to corresponding work in the courses in Rush Medical College. Such a student should give an explicit statement in regard to his preliminary education, in high school or academy and in college, before beginning the study of medicine,

[1] The numbers in parentheses refer to the course numbers in the corresponding department.

[2] For definition of major see p. 40.

the date of beginning and ending of each session attended in a medical college, together with the name of the college and a statement of the studies which he has successfully completed, this latter statement setting forth the exact number of hours given to each subject. The credit claimed in each branch must be passed upon by the Dean of Medical Students. *Attention is called to the fact that a limit is set to the number of students admitted to each class. Those to be admitted are selected on the basis of merit in scholarship and other qualifications requisite for the study and practice of medicine.*

Application blanks.—Blanks for presenting these credits will be furnished on application to the Dean of Medical Students. A student may matriculate at any time in person or by correspondence.

REQUIREMENTS FOR GRADUATION

The following are the requirements for the degree of Doctor of Medicine:

The candidate must be not less than twenty-one years of agê and must have studied medicine the legal period. He must have paid all dues, must have complied with all the requirements, and must have maintained unexceptionable conduct while at the College.

He must have attended twelve full quarters, or an equivalent amount of time, in a recognized medical school, of which at least the last three quarters must have been taken in this institution, and fifty-two months must have elapsed between the beginning of his first session in a medical school and the date of his graduation.

He must have completed successfully all of the work required, as follows: 18 majors of work in the Freshman and Sophomore years, comprising a minimum of 6½ majors in Anatomy (from courses offered in the Department of Anatomy and the subdepartment of Embryology; these courses include both Gross and Microscopic Anatomy[1]); 6 majors in Physiology (from courses offered in the Departments of Physiology and of Physiological Chemistry and Pharmacology); 2 majors in the Department of Pathology; 1½ majors in the Department of Bacteriology; 2 majors in one or more of the departments of his choice.[2]

His work for the first two years must be pronounced satisfactory by the Committee on Promotions, when a certificate for the completion of the first 18 majors of medical work will be issued to him.

Twenty-two majors of work in the Junior and Senior years, comprising a minimum of 2 majors in Pharmacy, Materia Medica, Therapeutics, and Medical Jurisprudence; 1 major in Pathology; 6 majors in Medicine; 5 majors in Surgery; 3 majors in Obstetrics and Gynecology,[3] at least 2 majors of which must be in Obstetrics; 1.2 majors in Laryngology and Otology; .8 major in Ophthalmology; 1 major in Skin and Venereal Diseases, 2 additional majors in any branch or branches of his choice. These requirements are presented in detail in the departmental statements, pp. 74–97.

[1] They must include the dissection of the lateral half of the human body.

[2] As to the conditions governing such choice see p. 41, paragraph 4.

[3] Each student must have personally attended not less than twelve patients in confinement.

He must have passed successfully, a final examination, both written and practical, in Materia Medica and Therapeutics; Pathology; Medicine; Surgery; Obstetrics and Gynecology; Laryngology and Otology; Ophthalmology; Skin and Venereal Diseases.

On the successful completion of four years of work, and of the final examinations, a four-year certificate is issued which qualifies the student to serve as an interne in a hospital.

He must serve a year of successful interneship in an approved hospital, or in advanced work, including clinical training, in one of the departments of the College.

He must attend the graduating exercises and receive his diploma in person, unless excused for cause by special action of the Faculty.

GENERAL INFORMATION FOR STUDENTS ENTERING THE JUNIOR AND SENIOR CLASSES AT RUSH MEDICAL COLLEGE

Attendance.—In order to be credited properly with attendance on any given term or course, it is imperative that students be present at the opening of each quarter *After the second day of any quarter no student can register except by special consent of the Dean and the payment of $5.00 late registration fee.* At least 80 per cent of any quarter or of the scheduled hours in any course for which a student is registered must be attended in order to receive credit for the course.

Matriculation.—Each student matriculates on entering the College for the first time, but not for subsequent quarters. Matriculation may be accomplished by mail.

Registration.—Each student registers before or at the beginning of each quarter by paying the tuition fee for the quarter and filing a registration card.

In case of early registration this card is retained at the Registrar's office and *must be reclaimed by the student in person on the first or second day of the quarter. If not reclaimed at that time, the student's registration for the quarter will be canceled, and can only be restored by the consent of the Dean and the payment of $5.00 late registration fee.*

A student, upon entering the College, at the beginning of his first quarter will procure from the Registrar a blank application for admission, fill out the same carefully, and return it to the Registrar, with the matriculation fee, for which he will receive a receipt.

The student will then present himself to the Dean of Students and exhibit to him the credentials for admission to advanced standing (see requirements for admission to advanced standing, p. 35).

The Dean will issue a card certifying admission to the proper class and will advise respecting the courses of study to be taken.

College fees.—(1) Matriculation fee, $10.00, payable but once. (2) Tuition for each quarter, $80.00. (3) A compound microscope is required for some of the clinical courses. *Every student is strongly advised to purchase a good microscope, with an immersion lens, in order that he may become familiar with the same instrument which he will use after his graduation.* Students not possessing a micro-

scope may rent one from the College at a cost of $2.00 per quarter for a compound microscope and $1.50 additional for an immersion lens. Each student is required to secure, for use in the clinical laboratories, a hemacytometer (cost, about $16.00) and a hemoglobinometer or a Talquist scale. (4) A fee of $20.00 is paid for the out-patient obstetrical work. (5) No student can be assigned to any college work until his fees are paid. (6) The annual ticket for the County Hospital is $5.00, which is procured from the Warden at the Hospital.

Deposit.—A deposit of $5.00 is required from each student to cover the cost of unnecessary damage in the College buildings and of avoidable loss and breakage in the laboratories. Deductions will be made from this deposit to cover the cost of articles not returned or of damage to College property. Each student will be charged for damage or loss for which he is individually responsible and for his pro rata share of damage or loss, the responsibility for which cannot be individually located. The deposit must be made on entering the College.

PHYSICIAN'S FEE

Graduates of this College are admitted to all lectures upon the payment of the annual fee of $5.00. Graduates of other colleges, attending the full course, will pay the fees of undergraduate students, or a physician may pay $30.00 per month, which entitles him to attend undergraduate courses offered for that period.

The number of persons who may register for some courses is limited. No student or practitioner is admitted to such course beyond the limit specified.

Graduates of this or other colleges who are visiting the city for a brief time are cordially welcomed, but are required to procure complimentary tickets at the office.

No one is authorized to make any modification of the terms regarding fees. On financial matters the Registrar, who represents the Comptroller at the College office, should be consulted.

The right is reserved to make changes in the fees, curriculum, or in any other matter at any time.

Schedule of lecture hours.—Schedules are issued from the College office giving the time of each exercise.

Board and lodging.—Rooms may be obtained in the vicinity of the College at from $4.00 to $6.00 per week. Day board may be had at from $7.00 to $9.00 per week. Board and room together may be obtained at from $10.00 to $14.00 per week. A Bureau of Information is maintained at the College by the Y.M.C.A., to which students may apply for directions as to desirable board and lodging.

Books and instruments.—The average annual cost of the required books and instruments varies from $50.00 to $80.00.

The following table will furnish an estimate of the expenses of a student for each year at Rush Medical College:

	Lowest	Average	Liberal
Tuition for each year	$240.00	$240.00	$240.00
Board and room	350.00	450.00	550.00
Laundry	40.00	60.00	75.00
Books and instruments	50.00	65.00	80.00
Incidental expenses	60.00	100.00	140.00
Total	$750.00	$915.00	$1,090.00

THE YOUNG MEN'S CHRISTIAN ASSOCIATION

A branch of the Young Men's Christian Association is in active operation at Rush Medical College, and the headquarters of the West Side Association are situated within a short distance of the College buildings. Membership in the Association, with the privilege of gymnasium, bathrooms, lecture courses, etc., may be obtained through the Rush Medical branch at reduced prices. Further information in regard to the Association may be obtained by application to the Rush Medical branch of the Association.

THE QUARTER SYSTEM

The academic year is divided into four quarters. Each Quarter is divided into two terms. The year begins with the first day of the Summer Quarter.

The Autumn Quarter begins on October 1, except when this day falls on Sunday, when it begins on October 2; and it ends December 23, except that when this day falls on Saturday or Sunday it ends the preceding Friday (for the clinical courses, Saturday); and when December 23 falls on Monday it ends the preceding Saturday.

The Winter Quarter begins January 2, except when this day falls on Saturday or Sunday, when it begins the Monday following; and it ends on the Friday falling between March 18 and March 24 inclusive (for the clinical courses, Saturday).

The Spring Quarter begins on the Monday falling between March 28 and April 3 inclusive, and ends on the Friday falling between June 12 and 18 inclusive (for the clinical courses, Saturday).

The Summer Quarter begins on the Monday falling between June 15 and 21 inclusive, and ends on the Friday falling between August 28 and September 3 inclusive (for the clinical courses, Saturday).

Official University Holidays are observed on Lincoln's Birthday, Washington's Birthday, Memorial Day, Independence Day, and Thanksgiving Day. When Independence Day falls on Sunday, the following Monday is observed as a holiday.

THE MEDICAL CURRICULUM AS RELATED TO THE QUARTER SYSTEM

The general course of instruction in Rush Medical College requires four years of study in residence, with a minimum of attendance upon three quarters of each year. These years are designated as the Freshman, Sophomore, Junior, and Senior years, respectively.

A student may begin his college work on the first day of any quarter (see, however, p. 41, § 5), and may continue in residence for as many successive quarters as he desires, and will receive credit for work accomplished. Attendance during all the four quarters of the year is optional, but will not secure a time credit of more than one year in a medical school. At least fifty-two months must elapse between the date of the first matriculation and the date of graduation. Under the restriction imposed this system does not conflict with the existing medical-practice acts, nor with the rulings of the various state boards of medical examiners.

THE SUMMER QUARTER

Attention is directed to the special opportunities afforded for medical study in the Summer Quarter. The climate of Chicago is particularly wel

adapted to midsummer work. Instruction in all departments is given in the ummer Quarter.

DEFINITION OF MAJOR AND MINOR

A Major course is defined as a didactic or recitation course, occupying 5 hours a week for one quarter (a total of 60 hours), or a laboratory, practical, or clinical course, occupying 10 hours a week for one quarter (a total of 120 hours). A double major occupies twice the number of hours per week for the quarter.

A Minor course is a didactic or recitation course, occupying 5 hours a week for one-half a quarter, or six weeks; or a laboratory course, occupying 10 hours per week for a similar period. The value of each course in the following departmental statements is stated as a *major* (Mj.), a *double major* (DMj.), a *minor* (M.), a *double minor* (DM.), or the decimal fraction of a *major* or *minor*.

GRADUATE COURSES IN MEDICINE FOR PHYSICIANS AND ADVANCED STUDENTS

Opportunities are afforded to physicians and graduate students at Rush Medical College and at the University for advanced and research work in Physics, Chemistry, Zoölogy and Embryology, Anatomy, Neurology, Psychology, Physiology, Physiological Chemistry, and Pharmacology, and in Pathology and Bacteriology in Medicine, Surgery, Obstetrics, Gynecology, and in the other clinical departments. Research work may be conducted independently or under the direction of an instructor in the department to which it belongs.

Physicians are admitted on payment of the matriculation fee and payment of fees in proportion to the amount of work taken (see p. 38). The applicant's fitness for any course which he desires to take should be ascertained by consultation with the heads of the respective departments.

All of the courses offered are well adapted to students of this class, and they are outlined in pp. 46–97 of this *Circular*. Correspondence is invited in reference to special work other than the courses offered. It will be sufficient to address letters in reference to such courses to Rush Medical Colleges. Undergraduates are given preference in registering for courses which are restricted to a small group of students.

Students desiring to engage in work leading to the degrees of Master of Science, Master of Arts, Master of Philosophy, or to the degree of Doctor of Philosophy are requested to write for the *Circular of Information* of the Graduate Schools of Arts, Literature, and Science of the University of Chicago.

THE WORK OF THE MEDICAL COURSE FOR THE FRESHMAN AND SOPHOMORE YEARS

1. *Outline of the course.*—The course for the first two years' work in Medicine consists mainly of instruction in the fundamental medical sciences: Human Anatomy, Microscopic Anatomy, Histology, Neurology, Embryology, Physiology, Physiological Chemistry, Toxicology, Pharmacology, Bacteriology, and Pathology. All this work is given at the University of Chicago.

2. *Amount of work.*—The amount of work required is 18 majors.

3. *The curriculum.*—The following courses constitute the curriculum recommended for and pursued by the majority of the students:[1]

a) *Anatomy*, 6½ majors as follows: Human Anatomy (Dissecting), 3½ majors (1, 2, 3, 4)[2]; Splanchnology, Histology, and Cytology, 1 major (10); Embryology, 1 major (Zoölogy 20); Neurology, 1 major (Anatomy 17).

b) *Physiology*
c) *Physiological Chemistry and Pharmacology* } 6 majors as follows: Physiology, 3 majors (12, 13, 14); Physiological Chemistry, 2 majors (19 and 20); Pharmacology, 1 major (21).

d) *Pathology*, 2 majors as follows: Pathology (1 and 2).

e) *Hygiene and Bacteriology*, 1½ majors as follows: Bacteriology (2B).

f) Two majors in any branch or branches of the student's choice, as approved by the Faculty.

4. *Election of medical courses.*—Students with adequate preparation and special qualifications are permitted to elect other courses (usually advanced or research work) in lieu of some of those above presecribed.

In electing his work the student should bear in mind: (*a*) that the right of election must be confirmed in writing in advance by the Dean and by the head of the department concerned; (*b*) that his registration for each quarter must receive the approval of the Dean; (*c*) that the prerequisites for any course must have been satisfied before the course can be elected; (*d*) that a minimum amount of work in the several branches is required for graduation in Medicine.

5. *Arrangement of courses.*—The order of courses has been arranged in such a way as to insure so far as possible for the student beginning his medical studies with any single quarter of the year a complete annual course during any three consecutive quarters; *but students must begin their medical work proper with the Autumn or Spring Quarter.*

ARRANGEMENT OF COURSES FOR SIX QUARTERS

Many of the required medical courses are given twice or, including the Summer Quarter, three times in one year. The sixteen majors of required and two majors of elective work may be taken in any order or combination desired by the student, provided he has the necessary preparation for each course when taken, as indicated by the prerequisite courses.

The sequence of courses recommended for the student during the six quarters of the Freshman and Sophomore years of the Medical Curriculum is indicated in the appended outline. In case the student is unable to secure the group of courses recommended for any quarter in his sequence, courses which may be taken as alternatives are indicated in italics.

[1] Detailed statements concerning the courses are given under the various departments of instruction. They should be consulted in every case *in regard to equivalent courses which may be submitted for those whose numbers are given in the foregoing schedule.*

[2] The numbers in parentheses refer to the course numbers in the corresponding department.

FIRST QUARTER

Recommended:
Dissection, 1½Mjs., Anatomy 1, 2
Histology, Mj., Anatomy 10
Elective, ½Mj.

Permissible:
Embryology, Mj., Zoölogy 20
Anatomy 11, 12, Mj.
Prerequisite: Anatomy 10
Physiological Chemistry 19, Mj.

SECOND QUARTER

Recommended:
Dissection, Mj., Anatomy 3 or 4
Physiological Chemistry, Mj., Physiological Chemistry 19
Prerequisite: Organic Chemistry
Elective, Mj.

Permissible:
Embryology, Mj., Zoölogy 20
Pharmacology 23

THIRD QUARTER

Recommended:
Embryology, Mj., Zoölogy 20
Dissection, Mj., Anatomy 3 or 4
Physiology, Mj., Physiology 12
Prerequisite: Physiological Chemistry 19
Bacteriology, 1½Mjs., Bacteriology 2B
Prerequisite: Physiological Chemistry 19

Permissible:
Physiological Chemistry 20, Mj.
Prerequisite: Physiological Chemistry 19
Bacteriology 2B, 1½Mjs.
Elective, Mj.
Pharmacology 23

FOURTH QUARTER

Recommended:
Neurology, Mj., Anatomy 17
Prerequisite: Histology
Physiology, Mj., Physiology 13
Prerequisite: Physiology 12
Physiological Chemistry, Mj., Physiological Chemistry 20
Prerequisite: Physiological Chemistry 19
Pathology, Mj., Pathology 1
Prerequisite: Bacteriology 2B

Permissible:
Pathology 1, Mj.
Physiology 14, Mj.
Prerequisite: Neurology
Elective, Mj.

FIFTH QUARTER

Recommended:
Physiology, Mj., Physiology 14
Pharmacology, Mj., Pharmacology 21
Prerequisite: Physiology 12, 13, 14; Physiological Chemistry 19 and 20
Pathology, Mj., Pathology 1

Permissible:
Pathology 2, Mj.
Prerequisite: Pathology 1
Elective, 1 or 2 Mjs.

SIXTH QUARTER

Recommended:
Pathology 2, Mj.

Permissible:
Elective, 1 or 2 Mjs.

Students are strongly advised to take Histology and Embryology as part of the college work required for admission. It is of decided advantage to complete these courses before beginning Gross Anatomy (Dissection).

Organic Chemistry is an entrance requirement and is not considered as a course in Medicine, but Quantitative Analysis or advanced Organic Chemistry may be so considered.

THE WORK OF THE CLINICAL YEARS

Elective and optional courses.—A certain number of courses, especially in the Freshman and Sophomore years of study, are required as essential to securing credit in making up the four-year curriculum which must precede graduation. All of the courses offered in the Junior and Senior years are elective; that is, the student will be required to select from the list of elective courses a number sufficient to insure him credit for about eleven majors each year. The term "major" is fully explained in another paragraph. By this system the student can select not only his line of study, but also his teachers in such special lines, and

can, further, so arrange his work that in successive years he can practically include all branches taught in the College. He will be required to present, however, a minimum amount of credit in each department. See requirements for graduation (p. 36).

Advice by the head of each department as to the recommended sequence of courses is contained in a circular of information issued to each student at the beginning of the Autumn Quarter.

The quarter system with elective courses is especially well adapted to the medical curriculum, and possesses the advantages of allowing each student to select a portion of his studies, and so to adapt his course to his tastes, his abilities, and his needs. The plan is *not* designed, however, to enable a student to prepare for a special line of practice. A broad and thorough education in general medicine is essential for adequate preparation for special practice in later years.

Optional courses, in addition to those described above, are offered to students who desire to add them to the regular courses as outlined in the requirements for graduation. These optional courses are designed to promote a higher scholarship and to increase facilities for work in special departments.

FIFTH YEAR

A FIFTH YEAR IS NOW REQUIRED FOR GRADUATION.

The work of this fifth year consists of:

A. An interneship in a hospital approved by the Faculty and taken under condition prescribed by the Faculty, or

B. Advanced work as a Fellow or Research Student in one of the departments of the College, including clinical work, with the presentation of a dissertation embodying original work.

INFORMATION, RULES AND REGULATIONS APPERTAINING TO THE FIFTH OR INTERNE YEAR

GENERAL

1. For students who enter the medical school with the Summer Quarter of 1914 or thereafter a fifth year is required for graduation, consisting of an interneship in a hospital approved by the Faculty, and taken under conditions prescribed by the Faculty.

2. On successful completion of the first four years including the usual final examinations the student receives a certificate only, which qualifies him to enter upon the work of the fifth year. On completing successfully the fifth year he will be entitled, on recommendation of the Faculty, to the diploma conferring upon him the degree of Doctor in Medicine.

3. Every student must secure an interneship by examination or appointment and must notify the Dean of Students *within four days after entering the hospital on special blank supplied for this purpose.* Before making application for such interneship the student should determine whether the hospital contemplated is on the approved list of hospitals as posted in the office of the Dean. If it is not, he should submit to the Dean of Students a request for action by the Committee on Fifth Year as to whether or not that hospital will be approved.

4. All internes during their service shall be under the supervision of the Committee on Fifth Year, aided by such members of the Faculty as the Committee may select to act as "supervisors."

INTERNES

5. Each interne shall be assigned to a supervisor and shall be required, wheresoever he may be taking his interneship, to report to his supervisor as set forth herewith: (*a*) Immediately upon receiving notification from the Committee on Fifth Year of his assignment to a supervisor he shall communicate with the latter in writing, giving the date of the beginning of his interneship, the service entered upon, the name of the hospital superintendent, and the names of his first attending men. He shall also see that the name of his supervisor is given to the hospital superintendent and to these attending men, and subsequently to other attending men as he shall come into relationship with them. (*b*) Thereafter the interne shall report in writing to his supervisor every *two months*. These bi-monthly reports shall include a reasonably detailed account of his hospital work to date, and the names of any new attending men under whom he may have come by change of services.

6. If, at any time during the hospital service, the interne is confronted with a problem which might affect his fifth year standing and upon which he feels the need of advice and counsel, he shall communicate with his supervisor who will give the matter immediate consideration and if necessary will bring it at once to the attention of the Committee on Fifth Year.

7. An interne will be expected to conform to the rules for the conduct of internes prescribed by the hospital in which he is serving.

8. The attention of the internes is called to the clause in the catalog of the College under "Requirements for Graduation," which states that the candidate for a degree "must have maintained unexceptionable conduct while at the College." This is and will be construed to include all fifth year internes wheresoever they may be taking their fifth year work.

9. An interne abandoning, without the consent of the hospital authorities, an interneship which he has accepted, shall be denied his degree unless he satisfies the Faculty that there were valid and ample reasons for his leaving said interneship. No interne may transfer his service to another hospital until he has received the consent of the Committee on Fifth Year in writing.

In order to enforce this rule the College withholds the actual diploma of a student who may have completed a year of interneship in two hospitals until he has completed a full year of service for which he has contracted in the second hospital.

10. A student may, at the discretion of the Committee on Fifth Year, be required to pass an examination at the end of his term of service as interne.

11. The student shall be required to be present at the Convocation when his degree is to be conferred unless the Faculty grants his request that the degree be conferred *in absentia*.

12. A copy of these regulations will be given each student entering the fifth year work, which copy he shall keep for future reference.

SUPERVISORS

13. The Committee on Fifth Year, appointed by the Faculty, shall have charge of the supervision of the work of the fifth year internes, shall determine the quality of that work, and shall judge whether the interne is entitled to be recommended to the Faculty for the degree of Doctor in Medicine at the end of his service.

14. The Committee on Fifth Year shall appoint "supervisors" from the Faculty, or when deemed advisable, from the attending staff of the hospital in which the interne is serving.

15. One or more internes shall be assigned to each supervisor who shall be notified at once of such assignment or assignments by the Secretary of the Committee on Fifth Year. The supervisor should, if possible, have a personal interview with the students assigned to him, before they enter upon their interne service.

16. Where possible the supervisor shall visit, for purposes of supervision and inspection, the hospital or hospitals where the internes under him are serving.

17. The supervisor shall require each interne under him to carry out the provisions relative to reports in paragraph 5 above, and shall communicate with and secure reports from hospital superintendents and attending men as to the quality of work done by said interne, using the blanks provided for that purpose.

18. He shall make quarterly individual reports on the work of the internes under him to the Committee on Fifth Year on blanks provided for that purpose, and shall make such comments and recommendations based on the reports received by him as will aid the Committee in each instance to act intelligently and justly in recommending to the Faculty whether a degree is to be granted, an examination required, or a degree deferred or denied.

19. The supervisor will be expected also to serve the internes under him in the capacity of counselor and helper. He shall give careful attention to and promptly answer all communications from internes requesting advice; and, if in doubt as to the course of action to recommend, shall place the matter at once before the Committeee on Fifth Year through the Secretary of that body.

20. The supervisor shall keep all correspondence, reports, etc., relative to each interne on file; shall be ready at any time on request to turn the same over to the Committee on Fifth Year, and at the end of the interne's year shall deliver intact to the Committee all such correspondence, reports, etc., that may remain in his hands.

21. A copy of these regulations shall be sent each supervisor with his first notification of interne assignment, which copy he should file for future reference.

22. The list of approved hospitals is made up of those which meet the requirements laid down by the Faculty as to size, equipment, services, staff, etc., and which in their judgment offer an adequate interneship for fifth year students. This list is subject to additions and changes at any time.

23. The list of approved hospitals corrected to date will be found posted in the office of the Dean.

Communications which are to be referred to the Committee on Fifth Year should be addressed to the Secretary of the Committee on Interne Year, Rush Medical College, Chicago.

I. THE DEPARTMENT OF ANATOMY

OFFICERS OF INSTRUCTION

Robert Russell Bensley, A.B., M.B., Sc.D., Professor of Anatomy.
Charles Judson Herrick, Ph.D., Professor of Neurology.
Basil Coleman Hyatt Harvey, A.B., M.B., Professor of Anatomy.
Preston Kyes, A.M., M.D., Sc.D., Professor of Preventive Medicine.
Alexander A. Maximow, M.D., Professor of Anatomy.
George William Bartelmez, Ph.D., Associate Professor of Anatomy.
Charles Henry Swift, M.D., Ph.D., Assistant Professor of Anatomy.
Clark Owen Melick, S.B., Ph.D., Assistant Professor of Preventive Medicine.
Marion Hines-Loeb, A.B., Ph.D., Instructor in Anatomy.
Patrick Arthur Delaney, S.B., Associate in Anatomy.
Daniel Bartlett MacCallum, Ph.D., Associate in Anatomy.
Theophil Paul Grauer, S.B., Associate in Anatomy.
Jeannette Brown Obenchain, Ph.B., Research Assistant in Anatomy.

FELLOW, 1923–24

Percival Allen Gray, Jr., S.B.

INTRODUCTORY

The Department of Anatomy is organized to provide for instruction and research in vertebrate anatomy, including human anatomy, histology, embryology, and neurology. Two majors of elementary biology (Zoölogy 1 and Botany 1, or their equivalent) are prerequisite for all courses in the Department except course 16.

Students of medicine and other students desiring to study anatomy are strongly recommended to plan their work so that courses in vertebrate anatomy (Zoölogy 17) and vertebrate embryology precede the work in human anatomy. The recommended order of courses in preparation for work in human anatomy would thus be as follows: Zoölogy 1, Botany 1, Zoölogy 17, Anatomy 10, and Zoölogy 20.

All students taking courses in Anatomy should have a good knowledge of French and German. For graduate students this is indispensable.

UNDERGRADUATE SEQUENCES

I. PRINCIPAL SEQUENCES

Zoölogy 17, Zoölogy 20, Anatomy 1, 2, 3, 4, 10, 11, 17, 21.

II. SECONDARY SEQUENCES

Zoölogy 17, Zoölogy 20, Anatomy 10, and three majors selected from Anatomy 1, 2, 3, 4, 17, 21.

CANDIDACY FOR HIGHER DEGREES

All candidates for the degree of Doctor of Philosophy in Anatomy should have undergraduate credit for courses 1, 2, 3, 4, 10, 17, or their equivalent. Graduate courses will be selected after consultation with the Department.

Candidates for the degree of Master of Science in Anatomy are required to take courses in Anatomy amounting to nine majors, of which three majors must be in research work chosen from courses 28, 29, 30, 32, 41, 42, 43.

COURSES OF INSTRUCTION

I. SENIOR COLLEGE COURSES

1, 2, 3, 4. Human Dissection.—The student makes a complete dissection of all structures, using atlases and textbooks as guides. He demonstrates his work to the instructor daily and there are frequent conferences in the laboratory. Laboratory fee, $6.00 per major. Lectures, 2:30, M., Tu., W.; laboratory work, 2:30–5:30, M.–F. 3½Mjs. Summer, Assistant Professor Swift; Autumn, Winter, Spring, Professor Harvey and Assistant Professor Swift.

Courses 1 and 2.—Dissection of upper and lower extremities. 1½Mjs.
Course 3.—Dissection of thorax and abdomen. 1Mj.
Course 4.—Dissection of head and neck. 1Mj.

10. Histology.—A brief course on the structure of the cell and elementary tissues will be followed by a systematic study of the structure of organs. Laboratory fee, $6.00. Mj. 8:00–10:00, M.–F., Summer, Mr. Delaney; Autumn and Winter, Professor Maximow; Spring, Associate Professor Bartelmez.

11. Histology of the Organs of Internal Secretion.—Laboratory fee, $6.00. Mj. Autumn, 8:00–10:00, Professor Bensley.

12. Histology of the Urinogenital Sysetm.—Laboratory fee, $6.00. Mj. Winter, 8:00–10:00, Professor Bensley.

14. Histology of the Organs of Circulation and Respiration.—Laboratory fee, $6.00. Mj. Spring, 8:00–10:00, Professor Bensley.

16. Elementary Neurology.—Prerequisite: for undergraduate students, elementary biology or human physiology with laboratory work; graduate students may be admitted without this prerequisite. Medical credit in neurology is not given for this course. Mj. Autumn, 8:00–10:00, M.–F., Professor Herrick.

17. Anatomy of the Nervous System.—An introductory course for medical students and others. Prerequisite: course 10. Laboratory fee, $6.00. Mj. Summer, Dr. Hines-Loeb; Autumn and Winter, 11:00–1:00, Professor Herrick and Associate Professor Bartelmez.

18. Advanced Neurology.—Lectures and laboratory work on subjects to be determined by the requirements of the class. Prerequisite: course 16 or 17. Laboratory fee, $6.00. Mj. Spring, Professor Herrick.

19. Cytology of Nerve Cells.—Hours to be arranged. Mj. or ½Mj. Winter, Associate Professor Bartelmez.

20. Development of the Skeleton.—A laboratory study of the development of the cartilaginous and bony skeleton in man on the basis of gross preparations and serial sections. May include the histogenesis of bone. Prerequisite: Anatomy 10 and Zoölogy 19 or 20. Laboratory fee, $6.00 per Mj. Mj. or ½Mj. Autumn, Winter, and Spring, Associate Professor Bartelmez.

21. Morphology of the Blood.—Mj. or ½Mj. Dr. Hines-Loeb. [Not given in 1923–24.]

22. Anatomy of the Foetus and Infant.—Mj. or ½Mj. Summer, Autumn, Winter, and Spring, Assistant Professor Swift.

II. GRADUATE COURSES

25. Comparative Neurology.—The evolution of the architecture and function of the vertebrate nervous system. Prerequisite: course 16 or 17. Mj. Spring, Professor Herrick.

28, 29, 30. Neurological Research.—Admission to these courses may be obtained only after consultation with the Professor of Neurology. A good knowl-

edge of general anatomy, physiology, and neurology will be required. 3Mjs. or 3DMjs. Autumn, Winter, Spring, and Summer, PROFESSOR HERRICK.

31. Immunology.—Consideration of susceptibility and resistance to disease with special reference to the mechanism of host defense in the bacterial infections. Mj. or DMj. Autumn and Spring, PROFESSOR KYES AND ASSISTANT PROFESSOR MELICK.

31A. Immunology.—Continuation of course 31 with special reference to the qualitative and quantitative toxins and to immune sera. Mj. or DMj. Winter and Summer, ASSISTANT PROFESSOR MELICK.

32. Research in Immunology.—Mj. or DMj. Autumn, Winter, Spring, and Summer, PROFESSOR KYES AND ASSISTANT PROFESSOR MELICK.

33. Structure and Histogenesis of Blood and Connective Tissue.—Laboratory fee, $6.00. Mj. Summer and Spring, PROFESSOR MAXIMOW.

34. Origin and History of the Germ Cells.—Mj. or ½Mj. Spring, ASSISTANT PROFESSOR SWIFT.

37. Introduction to Research in Anatomy.—Mj. Spring, PROFESSOR BENSLEY.

38A. Seminar.—Structure and function of the autonomic nervous system. ½Mj. DR. HINES-LOEB. [Not given in 1923–24.]

38B. Laboratory Course on the Structure and Function of the Autonomic Nervous System.—½Mj. DR. HINES-LOEB. [Not given in 1923–24.]

39. Organogeny.—This course affords an opportunity to work on material in the Human Embryological Collection which comprises about nine hundred specimens ranging from three weeks old to full term. A single system of organs may be studied in detail or several systems may be selected according to individual needs. Prerequisite: Anatomy 10 and Zoölogy 19 or 20. Laboratory fee, $6.00 per Mj. Mj. or DMj. Autumn, Winter, and Spring, ASSOCIATE PROFESSOR BARTELMEZ.

40. Advanced Work.—Opportunities are afforded for advanced work in all branches of anatomy. Laboratory fee, $6.00 per Mj. PROFESSOR BENSLEY, PROFESSOR HERRICK, PROFESSOR HARVEY, PROFESSOR MAXIMOW, AND OTHERS.

41. Research Work.—The laboratory is equipped for the investigation of anatomical problems. Suitably trained persons, who have the time to do such work, will be encouraged to undertake it. PROFESSOR BENSLEY, PROFESSOR HARVEY, PROFESSOR MAXIMOW, ASSOCIATE PROFESSOR BARTELMEZ, AND ASSISTANT PROFESSOR SWIFT.

45, 46, 47.—Seminar.—A limited number of students may, by arrangement with the Professor of Anatomy, be admitted to a seminar in which subjects of current interest in anatomy will be discussed. ½Mj. Autumn, Winter, and Spring, PROFESSOR BENSELY AND ASSISTANT PROFESSOR SWIFT.

49, 50, 51.—History of Anatomy.—½Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR SWIFT.

TABULAR VIEW OF COURSES OFFERED BY THE DEPARTMENT OF ANATOMY, 1923–24

Hour	Summer, 1923	Autumn, 1923	Winter, 1924	Spring, 1924
8:00	10. M.–F., 8:00–10:00	10. M.–F., 8:00–10:00 11. 8:00–10:00 16. M.–F., 8:00–10:00	10. M.–F., 8:00–10:00 11. 8:00–10:00	10. M.–F., 8:00–10:00 14. 8:00–10:00
9:00				
10:00				
11:00	17. 11:00–1:00	17. 11:00–1:00	17. 11:00–1:00	
12:30				
1:30				
2:30	1, 2, 3, 4 Lect.: M., Tu., W. Lab.: 2:30–5:30, M.–F.	1 ,2, 3, 4 Lect.: M., Tu., W. Lab.: 2:30–5:30, M.–F.	1, 2, 3, 4 Lect.: M., Tu., W. Lab.: 2:30–5:30, M.–F.	1, 2, 3, 4 Lect.: M., Tu., W. Lab.: 2:30–5:30, M.–F.
3:30				
Hours to be arranged	22, 31A, 32, 33, 40, 41	20, 22, 28, 31, 32, 39, 40, 41, 45, 49	19, 20, 22, 29, 31A, 32, 39, 40, 41, 46, 50	18, 20, 22, 25, 30, 31, 32, 33, 34, 37, 39, 41, 43, 47, 51

IA. THE DEPARTMENT OF ZOÖLOGY

OFFICERS OF INSTRUCTION

Frank Rattray Lillie, Ph.D., Sc.D., Professor of Embryology and Chairman of the Department of Zoölogy.
Charles Manning Child, Ph.D., Professor of Zoölogy.
Horatio Hackett Newman, Ph.D., Professor of Zoölogy.
Warder Clyde Allee, Ph.D., Associate Professor of Zoölogy.
Carl Richard Moore, Ph.D., Assistant Professor of Zoölogy.
Albert William Bellamy, Ph.D., Assistant Professor of Zoölogy.
Benjamin Harrison Willier, Ph.D., Instructor in Zoölogy.
Libbie Henrietta Hyman, Ph.D., Research Assistant in Zoölogy.
Theodore Sessinghaus Eliot, A.B., Assistant in Zoölogy.
Malcolm D. Brode, A.B., Assistant in Zoölogy.
Harvey Darell Chase, A.M., Assistant in Zoölogy.

FELLOWS, 1923–24

Mary Jane Brown, A.B. Albert Martinius Holmquist, S.M.
Constancio Pacifico Rustia, S.B.

INTRODUCTORY

The courses in Zoölogy aim to meet the needs of those students who desire to obtain some knowledge of Zoölogy as part of their general education, those who need work in Zoölogy to satisfy the requirements of other departments, and those who propose to specialize in Zoölogy. The leading purpose of the courses is to present the subject-matter of the science, its guiding ideas, its principal subdivisions, its scope, methods, and history, and its relations to other sciences.

Undergraduate work in Zoölogy.—It is advisable that students who propose to *specialize* in Zoölogy should obtain a broad scientific foundation, including work in the cognate sciences, and a reading knowledge of French and German. More specifically, students specializing in Zoölogy should take 4 or 5 majors in Chemistry, 2 or 3 in Physics, and 1 or 2 in Geology; they should also obtain knowledge of the general principles of microscopical Anatomy, Paleontology, Botany, and Physiology. These courses may be taken concurrently with the work in Zoölogy. Consultation with reference to the sequence of courses taken in the Department is required. (See the *Undergraduate Course Book.*)

COURSES AVAILABLE FOR UNDERGRADUATE SEQUENCES

For students who have had less than a unit of Zoölogy in high school, course 1 is prerequisite for all courses except 5 and 7. Students presenting credits for one unit of Zoölogy in high school may begin with course 15, but will be required to supplement their sequence by taking course 5 or 7. Courses 15, 16, and 17 may be taken in any order.

SECONDARY SEQUENCE

5 or 7, 15, 16, 17, 18, 19.

PRINCIPAL SEQUENCES

a) General: Secondary sequence, with the addition of 3 majors selected from courses 21–27. This sequence is intended primarily for teachers in the secondary schools.

b) Genetics and Experimental Zoölogy: Secondary sequence, with 3 majors from courses 26 and 30–35.

c) Ecology: Secondary sequence, with the addition of courses 24, 25, and 26.

COMBINATION NINE-MAJOR SEQUENCES

a) Zoölogy-Botany: Zoölogy 5, 7, 16, 17, 20 and Botany 2 or 3, 7, 8, and 9.

b) Comparative Anatomy: Zoölogy 15, 16, 17, 18, 19, 21; Anatomy 10, 1, 2, 3.

Graduate work in Zoölogy.—Students proposing to undertake graduate work in Zoölogy should have credit for an undergraduate principal sequence in Zoölogy or its equivalent. They should also be grounded in other sciences as noted above; and a reading knowledge of German and French is required for candidacy for the degree of Doctor of Philosophy. The plan of the graduate courses involves three or four majors of formal courses and three majors or more of seminar courses in addition to research work in the Department. Certain courses from other departments depending on the student's preparation are also required. For the degree of Doctor of Philosophy the research work will usually extend over a period of three years. For the Master's degree Zoölogy 1, 5 or 7, 15, 16, and 17, or their equivalent, eight majors of graduate work, and a dissertation are required.

The Zoölogical Club.—The members of the staff and the advanced students of the department form a club which meets weekly for the presentation of the research work of members of the Department and for review and discussion of important new literature. The meetings are open to all students in the Department.

COURSES OF INSTRUCTION

Zoölogy 1 or its equivalent is prerequisite for all the Senior College courses in the Department. But course 5 or 7 may be accepted as its equivalent for advanced work in the Department at the option of the instructor offering advanced courses.

I. JUNIOR COLLEGE COURSES

NOTE.—For hours see "Tabular View of Courses," pp. 55–56.

1. Elementary Zoölogy.—Lectures and laboratory work constituting an instruction to the general principles and concepts of Zoölogy. Laboratory fee, $6.00. DM. Summer, First Term, MR. BISSONNETTE; Mj. Autumn, sec. *a*, ASSOCIATE PROFESSOR ALLEE AND DR. WILLIER; sec. *b*, PROFESSOR NEWMAN AND ASSISTANT PROFESSOR BELLAMY; Winter, ASSISTANT PROFESSOR BELLAMY.

5. Evolution, Genetics, and Eugenics.—An elementary course dealing with the history and principles of Evolution and Genetics and their application to modern experimental evolution and eugenics. Lectures, reading, and recitations. Mj. Summer, ASSISTANT PROFESSOR BELLAMY; Autumn and Spring, sec. *a*, ASSISTANT PROFESSOR BELLAMY; sec. *b*, PROFESSOR NEWMAN.

7. Field Zoölogy.—An introduction to local animal life based upon classification, distribution, and natural history of representatives of the different animal phyla living in this region. Laboratory fee, $3.00. Mj. Spring, ASSOCIATE PROFESSOR ALLEE.

II. SENIOR COLLEGE COURSES

NOTE.—Courses 15, 16, and 17 constitute a sequence running through the year. In special cases students who have credit for Botany 1, or who have studied Zoölogy in high school, may be admitted to the sequence without other prerequisites. Permission for such registration must be secured from the Department.

15. Invertebrate Zoölogy.—Study of representatives of the lower invertebrate groups, including the anatomy of the adult and the life-history, together with some discussion of the habits and distribution. Prerequisite: Zoölogy 1, or equivalent. Lectures, laboratory work, and demonstrations. Laboratory fee, $6.00. DM. Summer, Second Term; Mj. Autumn, PROFESSOR CHILD.

16. Invertebrate Zoölogy.—Comparative anatomy, development, and phylogeny of invertebrate groups not considered in courses 1 or 15. Prerequisite: Zoölogy 1, or equivalent. Laboratory fee, $6.00. Mj. Winter, DR. WILLIER.

17. Vertebrate Zoölogy.—Comparative anatomy, development, and phylogeny of vertebrates. Prerequisite: Zoölogy 1, or equivalent. Laboratory fee, $6.00. Mj. Summer, ASSISTANT PROFESSOR MOORE; Winter, sec. *a*, ASSISTANT PROFESSOR MOORE; sec. *b*, PROFESSOR NEWMAN; Spring, PROFESSOR NEWMAN AND ASSISTANT PROFESSOR BELLAMY.

18. Embryology.—The early stages of development of invertebrates and vertebrates, including maturation and fertilization of the ovum, cleavage, and the formation of the germ layers; origin of the embryo. Embryological theories. Embryological technique. Prerequisite: Zoölogy 15, 16, 17, or their equivalents. Laboratory fee, $6.00. Mj. Autumn, DR. WILLIER.

19. Embryology.—Continuation of course 18. Later development, especially of vertebrates. Prerequisite: Zoölogy 18. Laboratory fee, $6.00. Mj. Winter, PROFESSOR LILLIE.

20. Vertebrate Embryology (for medical students).—Birds and mammals. Lectures, demonstrations, and laboratory work. Prerequisite: Zoölogy 1 and 17, or their equivalents. Laboratory fee, $6.00. Mj. Summer, Autumn, Spring, ASSISTANT PROFESSOR MOORE AND ASSISTANTS.

21. Comparative Histology.—The structure of tissues as related to their ontogenetic development, evolution and function, of both invertebrates and vertebrates. Principles and methods of histological technique. Prerequisite: Zoölogy 15, 16, and 17, or their equivalents. Laboratory fee, $6.00. Mj. Spring, DR. WILLIER.

24. Animal Ecology.—Origin and evolution of animal communities with particular reference to those found in the Chicago area. Prerequisite: Zoölogy 7 or equivalent. Laboratory fee, $3.00. Mj. Summer (or M. or DM. either Term), ASSOCIATE PROFESSOR ALLEE.

25. Animal Geography.—A study of the world-distribution of animals together with factors causing and limiting distribution. Lectures, conferences, and assigned topics. Prerequisite: Zoölogy 1 or 7. Mj. Autumn, ASSOCIATE PROFESSOR ALLEE.

26. Animal Behavior.—Analysis of animal activities with reference to the physiology and distribution of animals in general but with particular emphasis upon invertebrates and lower vertebrates. Prerequisite: Zoölogy 1 or 7. Laboratory fee, $6.00. Mj. Spring, ASSOCIATE PROFESSOR ALLEE.

27. Parasitology.—The biology, anatomy, and life-histories of animal parasites, including those productive of human disease. Prerequisite: Zoölogy 1 or 7, or equivalent. Laboratory fee, $6.00. Mj. Winter, DR. WILLIER.

30. Genetics.—A study of the principles of heredity. The work is largely individual and affords opportunity for practical work and training in methods of investigation used in genetics. Laboratory, conferences, and lectures. Prerequisite: Zoölogy 1, 5, and Botany 5, or equivalent. Laboratory fee, $6.00 per Mj. Mj. or DMj. Summer, Autumn, and Spring, ASSISTANT PROFESSOR BELLAMY.

31. Experimental Evolution.—A study of the origin of hereditary characteristics: inheritance of acquired characters; mutations; effects of changed

environmental conditions on hereditary behavior; hybridization. The laboratory work consists, for the most part, of a study of the effects of changed environmental conditions. Prerequisite: Zoölogy 30, or equivalent. Laboratory fee, $6.00. Mj. Winter, ASSISTANT PROFESSOR BELLAMY.

33-35. Physiological Zoölogy.—The course is concerned with the physiological and dynamic aspects of Zoölogy and consists primarily of laboratory work with some of the simpler animals which is supplemented by conferences and reading. Individual work, intended as training in methods, illustration of principles, and preparation for research may be assigned to each student. Work may begin in any quarter. Prerequisite: Zoölogy 1 (or 15), 16, 17, Chemistry 1, 2, 3, or their equivalent. Laboratory fee, $6.00 per Mj. Mj. or DMj. Autumn, Winter, and Spring, PROFESSOR CHILD.

39. Marine Biology (at the Marine Biological Laboratory at Woods Hole, Mass.).—Credit is given at the University of Chicago for courses taken at this laboratory. Registration at Woods Hole only. DMj. Summer, PROFESSOR LILLIE.

III. GRADUATE COURSES

45. Physiology of Development.—A consideration of existing data and views as material for a theory of development and heredity. Lectures, conferences, assigned topics. Prerequisite: Zoölogy 18 and 19, or equivalent. Mj. Autumn, PROFESSOR LILLIE.

47. Individuation and Reproduction.—A consideration of the problem of organic individuality and the processes and conditions of individuation and reproduction. The relations between regulatory processes, experimental reproduction, and the various processes of reproduction in nature. The work of the course will consist of lectures, reports, and discussion of literature and quizzes. DM. Summer, Second Term; Mj. Spring, PROFESSOR CHILD.

48. Cytological Problems.—Among the subjects considered are: morphology and physiology of the cell, cell division, the cell and the organism in growth, reproduction and regulation, the various methods of cytological research, their objects and their value. The work of the course consists of lectures, reports, discussions, and quizzes. Mj. PROFESSOR CHILD. [Not given in 1923–24.]

49. Problems of Animal Morphology and Phylogeny.—A course in methods of research for advanced undergraduate and first-year graduate students. Individual instruction and advice will be given as to methods of attacking problems, sources of literature, etc. Simple practice problems will be assigned if desired. Mj. every Quarter; individual work, PROFESSOR NEWMAN.

50. Organic Symmetry and Twinning.—An analysis of the basis of symmetry in organisms; of the phenomena of asymmetry and reversed symmetry; and especially of the causes and consequences of twinning. Mj. Winter, PROFESSOR NEWMAN.

51. Animal Aggregations.—A study of the different types of social organization and relations of animals; their origin and effect upon the individual and the species. DM. Summer, First Term, ASSOCIATE PROFESSOR ALLEE.

52. Problems in Animal Behavior and Ecology.—Individual instruction in beginning research in laboratory, field or library problems for advanced undergraduate or graduate students. Mj. each Quarter, ASSOCIATE PROFESSOR ALLEE.

IV. SEMINAR COURSES

60. Problems of Fertilization.—A consideration of the historical development and present status of the problems of fertilization. Prerequisite: Zoölogy 45, 50, and either 47 or 48. Mj. PROFESSOR LILLIE. [Not given in 1923–24.]

60A. The Biology of Sex.—A consideration of the biological problems of sex. Prerequisite: Zoölogy 45, 50, and either 47 or 48. Mj. Spring, PROFESSOR LILLIE.

63. The Problem of Reproduction in Organisms.—A study of the facts and theories concerning the various methods of reproduction in organisms; the effect of physiological and physical isolation of parts in nature and experiment; the germ-plasm theory in relation to the data of observation and experiments. Special topics will be assigned to each student for report and discussion. Prerequisite: Zoölogy 45, 50, and 47, or their equivalent. Mj. Winter, PROFESSOR CHILD.

64. Senescence and Rejuvenescence.—A study of the facts and theories bearing upon the problem of age in organisms. The physiological and structural changes during ageing. The question of rejuvenescence. Prerequisite: Zoölogy 45, 50, and 47 or 48, or their equivalent. Mj. PROFESSOR CHILD. [Not given in 1923–24.]

V. RESEARCH COURSES

70. Zoölogy Problems.—Research at the Marine Biological Laboratory, Woods Hole, Mass. Prerequisite: such of the elementary courses as are essential to the special topic undertaken. Registration at Woods Hole only. 2 or 3Mjs. Summer, PROFESSOR LILLIE.

71. Zoölogical Problems.—Research. Laboratory fee, $6.00. 1 to 3Mjs. Summer, PROFESSOR CHILD AND ASSOCIATE PROFESSOR ALLEE.

72, 73, 74. Zoölogical Problems.—Research work. For graduate students. Prerequisite: training essential to the special topic undertaken. Laboratory fee, $6.00. 1 to 3Mjs. Autumn, Winter, and Spring, PROFESSORS LILLIE, CHILD, AND NEWMAN, ASSOCIATE PROFESSOR ALLEE, ASSISTANT PROFESSORS MOORE AND BELLAMY, AND DR. WILLIER.

TABULAR VIEW OF COURSES OFFERED BY THE DEPARTMENT OF ZOÖLOGY, 1923–24

Junior College courses are in italics; Senior College courses in CAPITALS; Graduate courses in Roman type

Hour	Summer, 1923	Autumn, 1923	Winter, 1924	Spring, 1924
8:00	17. VERTEBRATE ZOÖLOGY M.–F., 8:00–10:00 Mj. (Moore)	5a. *Evolution, Genetics, and Eugenics* M.–F. (Bellamy) 15. INVERTEBRATE ZOÖLOGY Lect.: M., Tu., 9:00 Lab.: M., Tu., 8:00–11:00 (Child) 20. VERTEBRATE EMBRYOLOGY Lect.: W., Th., F., 9:00 Lab.: M., Tu., 8:00–11:00 (Moore)	1. *Elementary Zoölogy* M.–F., 8:00–10:00 (Bellamy) 16. INVERTEBRATE ZOOLOGY Lect.: M., Tu., 9:00 Lab.: W., Th., F., 8:00–10:00 (Willier)	5a. *Evolution, Genetics, and Eugenics* M.–F. (Bellamy) 7. *Field Zoölogy* Lect.: W., Th., 8:00 Lab.: M., Tu., 8:00–10:00 Field: Sat. mornings (Allee)
9:00	30. GENETICS Lect.: M., W., 9:00 Lab.: arranged (Bellamy)	30. GENETICS Lect.: M., W., 9:00 Lab.: arranged (Bellamy)	31. EXPERIMENTAL EVOLUTION Lect.: M., W., 9:00 Lab.: arranged (Bellamy)	20a. VERTEBRATE EMBRYOLOGY Lect.: W., Th., F., 9:00 Lab.: M., Tu., 9:00–12:00 (Moore, Willier, and Assistants) 30. GENETICS Lect.: M., W., 9:00 Lab.: arranged (Bellamy)
10:00		1a. *Elementary Zoölogy* M.–F., 10:00–12:00 (Allee, Willier)	17a. VERTEBRATE ZOÖLOGY M.–F., 10:00–12:00 (Moore) 19. EMBRYOLOGY M.–F., 10:00–12:00 (Lillie)	26. ANIMAL BEHAVIOR Lect.: M., T., 10:00 Lab.: W., Th., F., 10:00–12:00 (Allee)

TABULAR VIEW OF COURSES OFFERED BY THE DEPARTMENT OF ZOÖLOGY, 1923–24—*Continued*

Hour	Summer, 1923	Autumn, 1923	Winter, 1924	Spring, 1924
11:00	5. *Evolution, Genetics, and Eugenics* M.–F. (Bellamy)	5*b*. *Evolution, Genetics, and Eugenics* M.–F. (Newman) 25. Animal Geography Lect.: M.–Th.		5*b*. *Evolution, Genetics, and Eugenics* M.–F. (Newman)
1:30	1. *Elementary Zoölogy* Lect.: M.–F., 1:30 Lab.: M.–F., 2:30–4:30 DM. 1st T. (Bissonnette) 15. Invertebrate Zoölogy Lect.: M.–F., 1:30 Lab.: M.–F., 2:30–4:30 DM. 2d T. (Child) 20. Vertebrate Embryology Lect.: Tu., W., F., 1:30 Lab.: M., Th., 1:30–4:30 (Moore) 24. Animal Ecology Lect.: M.–Th., 1:30 Lab.: M.–Th., 2:30–4:30 Field: Saturday Mj. (or M. or DM. either T.) (Allee)	1*b*. *Elementary Zoölogy* M.–F., 1:30–3:30 (Newman and Bellamy) 18. Embryology M.–F., 1:30–3:30 (Willier)	17*b*. Vertebrate Zoölogy M.–F., 1:30–3:30 (Newman) 27. Parasitology Lect.: Th., F., 1:30 Lab.: M., Tu., W., 1:30–3:30 (Willier)	17. Vertebrate Zoölogy M.–F., 1:30–3:30 (Newman and Bellamy) 20*b*. Vertebrate Embryology Lect.: See 9:00 Lab.: M., Tu., 1:30–4:30 (Moore and Assistants) 21. Comparative Histology Lect.: Th., F., 1:30 Lab.: M., Tu., W., 1:30–3:30 (Willier)
Hours to be arranged	39. Marine Biology (Lillie) 47. Individuation and Reproduction (Child) 51. Animal Aggregations (Allee) 52. Problems in Animal Behavior and Ecology (Allee) 70. Zoölogical Problems (Lillie) 71. Zoölogical Problems (Child and Allee)	33. Physiological Zoölogy (Child) 45. Physiology of Development (Lillie) 49. Problems in Morphology (Newman) 52. Problems in Animal Behavior and Ecology (Allee) 72. Zoölogical Problems (Research) (Lillie, Child, Newman, Allee, Moore, Bellamy, (Willier)	34. Physiological Zoölogy (Child) 49. Problems in Morphology (Newman) 50. Organic Symmetry and Twinning (Newman) 63. The Problem of Reproduction in Organisms (Child) 73. Zoölogical Problems (Research) (Lillie, Child, Newman, Moore, Bellamy, Willier)	35. Physiological Zoölogy (Child) 47. Individuation and Reproduction (Child) 49. Problems in Morphology, etc. (Newman) 52. Problems in Animal Behavior and Ecology (Allee) 60A. Biology of Sex (Lillie) 74. Zoölogical Problems (Research) (Lillie, Child, Newman, Allee, Moore, Bellamy, (Willier)

THE DEPARTMENT OF PHYSIOLOGY

OFFICERS OF INSTRUCTION

Anton Julius Carlson, A.M., Ph.D., M.D., LL.D., Professor of Physiology and Chairman of the Department.

Arno Benedict Luckhardt, Ph.D., M.D., Professor of Physiology.

David Judson Lingle, Ph.D., Associate Professor of Physiology.

Andrew Conway Ivy, Ph.D., M.D., Associate Professor of Physiology.

*Lester R. Dragstedt, Ph.D., M.D., Assistant Professor of Physiology.

Arthur Lawrie Tatum, Ph.D., M.D., Assistant Professor of Physiology (Spring Quarter).

Meta Kunde, S.B., National Research Fellow in Physiology.

Nathaniel Kleitman, A.M., Ph.D., Associate in Physiology.

Sarah Sheldon Tower, S.B., Assistant in Physiology.

Theodore Elliott Boyd, S.B., Assistant in Physiology..

Julius Blumenstock, S.B., S.M., Assistant in Physiology.

Sol Litt, S.B., Assistant in Physiology.

Kenneth Phillips, S.B., Assistant in Physiology.

FELLOWS, 1923–24

Rebekah M. Gibbons, S.M.

Frederick T. Jung, S.B.

INTRODUCTORY

The courses of the Department of Physiology are arranged for four classes of students:

I. Junior and Senior College students who desire some knowledge of human physiology, foods, and personal hygiene as an educational equipment for life.

II. Junior or Senior College students who wish to acquire a more extensive knowledge of the structure and functions of the human body, or who wish to study biology from the physiological side. To satisfy the needs of these students and enable them to cover the subject satisfactorily, a three-major course is given: courses 1, 2, 3, Introductory Physiology. In order to make it accessible to a large number of students, no prerequisites are demanded.[1]

III. Students wishing to specialize in Physiology, or students of other biological sciences who wish to take minor work in Physiology.

IV. Medical students.

For all courses except 0, 1, 2, and 3, General Biology and General Inorganic Chemistry, or equivalent courses, are prerequisite. For each major or double-minor course requiring laboratory work, the laboratory fee is $6.00.

* Resigned.

[1] Students who wish to get the most possible out of the course are strongly urged to take elementary general Chemistry and general Biology before beginning the work. As the accommodations are limited, preference in registration will be given to those students who will arrange their work so as to be able to take 1, 2, and 3.

UNDERGRADUATE SEQUENCES

The Department recommends that students taking Physiology as a major subject should pursue the following courses in introduction: Physics 2, 3, 4; Chemistry 2S, 3S, 4, 6, 8; Physiology 1, 2; Zoölogy 1, or Botany 1B; Geology 1. In addition one course in the Comparative Anatomy of Vertebrates.

I. PRINCIPAL SEQUENCES

Zoölogy 20, Anatomy 10, Bacteriology 1, Physiology 12, 13, 14, Physiological Chemistry 19, 20, Anatomy 17, or Psychology 1.

II. SECONDARY SEQUENCES

(Prerequisite: Botany 2B, Physiology 1, 2) Zoölogy 20, Anatomy 10, Physiological Chemistry 19, Bacteriology 1, Physiology 12, 13, Psychology 1.

THE BACHELOR'S DEGREE

Senior College students wishing to take their S.B. degree in Physiology should take courses 1, 2, 12, 13, 14. Courses in Chemistry, Physiological Chemistry, Physics, Histology, Bacteriology, Embryology, and Plant Physiology to the extent of three to four majors may be accepted as part of the total of nine majors required for graduation.

THE MASTER'S DEGREE

The requirements for the Master's degree, if all the work is taken in this Department, are: (1) Research, three majors (course 44); (2) five majors from the Graduate or Senior College courses; (3) dissertation. The Senior College courses that may be counted toward the Master's degree are 12, 13, 14.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Courses 12, 13, 14, and Physiological Chemistry 19 and 20, or their equivalents, are required of all candidates for the Doctor's degree, with Physiology as the major subject. The further selection of courses is arranged in each case by consultation.

COURSES OF INSTRUCTION

I. JUNIOR COLLEGE COURSES

Courses 0, 1, 2, and 3 are intended to familiarize the student with the facts concerning the structure and functions of the human body.

0. Physiology of the Human Body.—An introductory and elementary course, covering the main facts and important recent advances in human physiology, foods, nutrition, personal hygiene, and laws of health, primarily for undergraduate students who desire this knowledge as a part of their educational equipment for life, but who are unable to devote more of their college time to this subject. Lectures, W., Th., F., 1:30; laboratory and demonstrations, M., Tu., 1:30–3:30. Laboratory fee, $6.00. Mj. Summer, Associate Professor Ivy and Assistants; Winter, Professor Carlson and Assistants; Spring, Professor Carlson and Assistants.

1. Physiology of Blood, Respiration, Digestion, Secretion, and Absorption.—Lectures M., Tu., W., 10:00. Laboratory Th., F., 10:00–12:00. Laboratory fee, $6.00. Mj. Autumn and Winter, Associate Professor Lingle and Miss Tower.

2. Physiology of Circulation.—Muscle, peripheral nerves, animal heat, excretion. Lectures, M., Tu., W., 1:30. Laboratory, Th., F., 1:30–3:30. Laboratory fee, $6.00. Mj. Winter and Spring, Associate Professor Lingle and Miss Tower.

3. Physiology of the Brain, Cord, Eye, Ear.—Sense of taste, smell, pressure, temperature, and muscle sense. Lectures, M., Tu., W., 10:00. Laboratory, Th., F., 10:00–12:00. Laboratory fee, $6.00. Mj. Autumn and Spring, Associate Professor Lingle and Miss Tower.

II. SENIOR COLLEGE AND GRADUATE COURSES

12. Physiology of Blood, Circulation, and Respiration.—Lectures and recitations, 3 hours a week; laboratory work, 6 hours a week. Prerequisite: Physiological Chemistry. Laboratory fee, $6.00. Mj. Autumn and Spring, Professor Carlson, Associate Professor Ivy, and Assistants.

13. Physiology of Digestion, Metabolism, Absorption, Secretion, Excretion, Muscles, and Heat.—Lectures and recitations, 3 hours a week; laboratory, 6 hours a week. Prerequisite: Physiology 12. Laboratory fee, $6.00. Mj. Summer, Autumn, and Spring, Professor Luckhardt and Assistants.

14A. Physiology of the Nervous System and the Senses.—Lectures, two a week; recitation and conference, one a week; laboratory, 6 hours a week. Prerequisite: Neurology 17. Laboratory fee, $6.00. Mj. Summer and Winter, Professors Carlson and Luckhardt, Associate Professor Ivy, and Assistants.

III. GRADUATE COURSES

16. Special Physiology of Mammals.—Including the experiments not given in the general courses. Prerequisite: Physiology 12, 13, or 14, or equivalent. Laboratory fee, $6.00. ½Mj. Summer and Winter, S. 8:00–12:00, Professor Luckhardt.

18. The Principles of Physiology.—As they are applied to the clinical examination of the central nervous system and special senses. Laboratory fee, $3.00. ½Mj. Spring, Professor Luckhardt.

20. Special Physiology of the Gastrointestinal Tract.—Including disorders of digestion, ulcer, obstruction, intestinal stasis, and closely allied subjects. Mj. Summer, Autumn, and Spring, Associate Professor Ivy.

21. Principles and Methods of Human and Animal Calorimetry.—Laboratory fee, $3.00. ½Mj. Summer, Autumn, Miss Kunde.

30. Principles and Problems of Human Nutrition and Dietetics.—Prerequisite: Physiology 13. Laboratory fee, $6.00. Mj. Autumn, Professor Carlson.

32. Special Physiology of the Glands of Internal Secretion.—Laboratory fee, $6.00. Mj. Summer and Spring, Professor Carlson, Associate Professor Ivy.

41. Seminar: in Physiology Group.—Weekly. Summer, Autumn, Winter, and Spring, Professors Carlson, Luckhardt, Koch, Associate Professor Ivy, and Assistant Professor Tatum.

44. Research Work in Physiology.—Mj. or DMj. each Quarter. Laboratory fee, $6.00 per Mj. Professors Carlson and Luckhardt, Associate Professor Ivy.

IIA. THE DEPARTMENT OF PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY

OFFICERS OF INSTRUCTION IN PHYSIOLOGICAL CHEMISTRY

Fred Conrad Koch, Ph.D., Professor of Physiological Chemistry and Acting Chairman.

Martin Edward Hanke, Ph.D., Instructor in Physiological Chemistry.

Eloise Parsons, A.B., Associate in Physiological Chemistry.

Grant Melvin Kloster, S.B., Associate in Physiological Chemistry.
Harold Clifford Goldthorpe, S.B., Assistant in Physiological Chemistry.
Ida Kraus, S.M., Assistant in Physiological Chemistry.

FELLOWS, 1923–24

Beals Ensign Litchfield French, S.B.
Wilbur R. Tweedy, S.B.

OFFICERS OF INSTRUCTION IN PHARMACOLOGY

Arthur Lawrie Tatum, Ph.D., M.D., Assistant Professor of Pharmacology and Physiology.
Arthur John Atkinson, S.M., Associate in Pharmacology and Physiology.
Laird Sumner Van Dyck, A.B., Assistant in Pharmacology and Physiology.
George Cleveland Turner, S.B., Assistant in Pharmacology.

INTRODUCTORY

Physiological Chemistry, or Biochemistry, has as its field the chemistry of the cells and tissues of plants and animals, the principles of nutrition, the chemistry of the internal secretions, the chemical correlation of the organs of the body, the chemistry of the digestive processes and of the secretions and excretions; the chemical basis of such problems as those of pigmentation, inheritance, fertilization, irritability, and so on. It has to do also with the derangement of chemical processes in disease. The science thus stands in a close and complementary relation with zoölogy, botany, anatomy, pathology, physical physiology, and bacteriology on the one hand and with chemistry on the other.

Pharmacology deals with the chemistry of drugs, the detection of poisons, the nature and mode of action of chemical agents on organisms, and with the alterations of the physiological processes of the body produced by chemical agents of all kinds. It is a kind of bridge between physiology and therapeutics.

Of the courses offered in this Department, 19 and 20 are intended for medica and graduate students. They embrace the chemistry of the cells and tissues, of digestion, and of the excretions. They are the minimum requirement for students of medicine in Physiological Chemistry. Medical students who wish to take more advanced work are advised to take course 27 or 28, or both. Many of the methods learned in these courses are of value in medical research and in clinical work.

Graduate students in Physiological Chemistry or in other departments must take courses 19 and 20 or the equivalent. For more advanced work they are advised to choose from courses 27, 28, 29, 30, 37, and 38, depending on the nature of their field of work. Course 27 is strongly recommended for all graduate students taking Physiological Chemistry as a minor. Courses 28 and 37 give the practical training in methods as applied to blood, urine, and tissues. Course 37 is good training for those who intend to enter government service or commercial laboratories dealing particularly with foods and drugs and their control. Students requiring more special training in Physiological Chemistry should take courses 27, 28, 29 (or 30), and 38.

In Pharmacology, course 21 covers the principles of the pharmacodynamic action of drugs and is particularly intended for medical students.

The Department is particularly desirous of stimulating research, but only when the student has been properly prepared to do the work well. After the research is under way the student is advised to devote practically all of his time to that study rather than to taking unrelated courses of instruction.

UNDERGRADUATE SEQUENCES

Since Physiological Chemistry involves a thorough training in both chemistry and biology it can only be studied after preparation in these other sciences. For that reason it cannot usually be undertaken before the third college year. The college sequence of studies in this Department may embrace for a principal sequence courses 19 and 20, at least three majors of Chemistry and the other four majors from the Departments of Physiology, Anatomy, Zoölogy, Botany, Bacteriology, or Physics. For the secondary sequence three or four majors of Chemistry, courses 19 and 20, and a major from any other department of science.

The Department recommends that students taking Physiological Chemistry as a major subject should pursue the following courses in introduction: Physics 1, 2, 3, 4; Chemistry 2S, 3S, 4, 6, 8; Physiology 1, 2, or Zoölogy 1 or 15; Botany 1 and 2; Geology 1. In addition, modern languages and one or more courses in Histology and the Comparative Anatomy of Vertebrates, and a course in the Calculus.

THE MASTER'S DEGREE

The requirements for the Master's degree, if all the work is taken in this Department, are: (1) Research, three majors (course 42 or 43); (2) six majors from the Graduate or Senior College courses; (3) thesis; (4) take part in the Departmental Seminar. The Senior College and Graduate courses that may be counted toward the Master's degree are 19, 20, 21, 27, 28, 29, 30.

THE DEGREE OF DOCTOR OF PHILOSOPHY

In Physiological Chemistry courses 19, 20, and 27, or their equivalent, and three or four majors in special methods and preparations, are required of all candidates for the Doctor's degree. In Physiology, courses 12, 13, and 14 or the equivalent are required. Knowledge of physical and organic chemistry and of the literature and history of physiological chemistry are also required. Main emphasis is laid, however, upon ability to do original and accurate research work. Candidates must take part in the seminars.

For the degree of Doctor of Philosophy in Pharmacology a thorough knowledge of physiology, physiological chemistry, toxicology, as well as of the history and literature of pharmacology and the completion of original research work, is required. Candidates must take part in the seminars.

REQUIREMENT FOR A MINOR IN PHYSIOLOGICAL CHEMISTRY

For students taking a full minor in Physiological Chemistry three majors will be credited for work equivalent to courses 12, 13, and 14 in Physiology, or other courses in General and Comparative Physiology, taken elsewhere; in addition six majors selected from courses 19, 20, 22, 27, 28, 29, 30, 37, 38, 42, and 43

are required. For students taking a partial minor in Physiological Chemistry the equivalent of three majors' work in Physiology or Physiological Chemistry taken elsewhere will be accepted in partial fulfilment of the requirement; in addition three majors selected from courses 19, 20, 27, 28, 29, 30, 37, 38, 42, or 43.

LABORATORY FEE

A laboratory fee of $6.00 per major or double minor is charged for each course involving laboratory work. A deposit of $5.00 per major for breakage is also required of each student taking laboratory work. For courses 19, 20, and 21 a deposit of $10.00 is required. Any balance remaining will be returned to the student.

A. COURSES OF INSTRUCTION IN PHYSIOLOGICAL CHEMISTRY

I. SENIOR COLLEGE COURSES

19.[1] **Physiological Chemistry.**—Chemistry of the carbohydrates, lipins, and proteins and the general chemistry of the cell. Lectures, two a week; recitations, one a week; laboratory, 6 hours a week. Prerequisite: General Chemistry, Qualitative Analysis, and Elementary Organic Chemistry. Quantitative Analysis recommended. Mj. Summer, Lect., M., Tu., W., 9:00. Laboratory, sec. *a*, Th. and F., 8:00–11:00, sec. *b*, Th. and F., 1:30–4:30, Dr. Hanke, Miss Parsons, and Messrs. Kloster and Goldthorpe. Winter, Lect., M., Tu., W., 1:30; Lab., sec. *a*, Th. and F., 8:00–11:00, sec. *b*, Th. and F., 1:30–4:30, sec. *c*, Sat., 8:00–1:00, Professor Koch, Dr. Hanke, Misses Parsons and Kraus and Messrs. Kloster and Goldthorpe.

20.[1] **Physiological Chemistry.**—Chemistry of digestion, metabolism, and excretion. Lectures and recitations, three a week; laboratory, 6 hours a week. Prerequisite: course 19. Mj. Autumn, Lect., M., Tu., W., 8:00; Lab., sec. *a*, Th. and F., 8:00–11:00, sec. *b*, Th. and F., 1:30–4:30, Dr. Hanke, Miss Parsons, and Messrs. Kloster and Goldthorpe. Spring, Lect., M., Tu., W., 9:00; Lab., sec. *a*, Th. and F., 8:00–11:00, sec. *b*, Th. and F., 1:30–4:30, Professor Koch, Dr. Hanke, Misses Parsons and Kraus, and Messrs. Kloster and Goldthorpe.

II. PRIMARILY FOR GRADUATE STUDENTS

27. Physical-chemical Methods Applied to the Tissues and Liquids of the Body.—Osmotic pressure; hydrogen ion determinations; freezing-points; conductivity; polariscope; etc. Practical work. Prerequisite: Physiological Chemistry 19 and 20, Physical Chemistry and Quantitative Analysis. Mj. or ½Mj. Summer and Winter, Dr. Hanke.

28. Quantitative Methods of Urine and Blood Analysis.—Determination of important constituents of the urine and blood. Prerequisite: course 20, or equivalent and Quantitative Analysis desired. ½Mj. or Mj. Autumn, Spring, and Summer, Professor Koch.

29. Biochemical Preparations.—Mj. Summer, Autumn, and Winter, Professor Koch and Dr. Hanke.

30. Biochemical Preparations.—Continuation of 29—Mj. Summer, Autumn, and Winter, Professor Koch and Dr. Hanke.

37. Methods of Quantitative Analysis in Physiological Chemistry as Applied to Plant and Animal Tissues.—Prerequisite: Quantitative Analysis. Mj. Summer and Winter, Professor Koch.

[1] Courses 19 and 20 are required of medical students for credit in Physiological Chemistry.

38. Methods of Quantitative Analysis of a Protein.—Prerequisite: Quantitative Analysis. Mj. Winter, Autumn, and Summer, PROFESSOR KOCH.

42. Research Work in Physiological Chemistry.—Mj. or DMj. each Quarter, PROFESSOR KOCH AND DR. HANKE.

45. Seminar.—A joint seminar in Physiology, Physiological Chemistry, and Pharmacology held weekly and conducted by members of the corresponding departments. No credit.

B. COURSES OF INSTRUCTION IN PHARMACOLOGY

21. Pharmacology.—Lectures and recitations, three hours a week; laboratory, 6 hours a week. Prerequisite: Physiology 12, 13, 14, Physiological Chemistry 19 and 20. Mj. Summer, Lect., M., Tu., W., 11:00; Lab., M., Tu., 1:30–4:30; Winter Lect., M., Tu., W., 8:00; Lab., sec. *a*, Th. and F., 8:00–11:00, sec. *b*, Th. and F., 1:30–4:30, ASSISTANT PROFESSOR TATUM AND MESSRS. ATKINSON, VAN DYCK, AND TURNER.

22. Special Problems in Pharmacology.—Laboratory work of advanced character in special problems in pharmacology. Mj. Autumn and Spring, ASSISTANT PROFESSOR TATUM.

23. Introductory Pharmacology.—An introductory course open to all medical students. This course includes the fundamentals of prescription writing, pharmacognosy and pharmacology. Lectures only ½Mj. Lectures and laboratory, Mj. Laboratory section limited to thirty students. Spring and Autumn, ASSISTANT PROFESSOR TATUM.

43. Research Work in Pharmacology.—Mj. or DMj. each Quarter, ASSISTANT PROFESSOR TATUM.

TABULAR VIEW OF COURSES OFFERED BY THE DEPARTMENT OF PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY, 1923–24

Hour	Summer, 1923	Autumn, 1923	Winter, 1924	Spring, 1924
8:00	Physiological Chem. 19 Lab., sec. *a*, Th. and F., 8:00–11:00	Physiological Chem. 20 Lect., M., Tu., W. Lab., sec. *a*, Th., F., 8:00–11:00	Physiological Chem. 19 Lab., sec. *a*, Th. and F., 8:00–11:00 Pharmacology 21 Lect., M., Tu., W. Lab., sec. *a*, Th. and F., 8:00–11:00	Physiological Chem. 20 Lab., sec. *a*, Th. and F., 8:00–11:00
9:00	Physiological Chem. 19 Lect., M., Tu., W.			Physiological Chem. 20 Lect., M., Tu., W.
10:00				
11:00	Pharmacology 21 Lect., M., Tu., W.			
12:30				
1:30	Physiological Chem. 19 Lab., sec. *b*, Th. and F., 1:30–4:30 Pharmacology 21 Lab., M., Tu., 1:30–4:30	Physiological Chem. 20 Lab., sec. *b*, Th. and F., 1:30–4:30	Physiological Chem. 19 Lect., M., Tu., W. Lab., sec. *b*, Th. and F., 1:30–4:30 Pharmacology 21 Lab., sec. *b*, Th. and F., 1:30–4:30	Physiological Chem. 20 Lab., sec. *b*, Th. and F., 1:30–4:30
2:30				
3:30		Pharmacology 23 Lect., M., Tu., W.		Pharmacology 23 Lect., M., Tu., W.
Hours to be arranged	Physiological Chem. 27, 28, 29, 30, 37, 38, 42, and 45 Pharmacology 43	Physiological Chem. 28, 29, 36, 38, 42, and 45 Pharmacology 23 (lab.), 11, 22, 43	Physiological Chem. 27, 29, 30, 37, 38, 42, and 45 Pharmacology 43 and 45	Physiological Chem., 28, 42, 45 Pharmacology 23 (lab.), 22, 43

III. THE DEPARTMENT OF CHEMISTRY

OFFICERS OF INSTRUCTION

AT THE UNIVERSITY OF CHICAGO

Julius Stieglitz, Ph.D., Sc.D., Chem.D., Professor and Chairman of the Department of Chemistry.
William Draper Harkins, Ph.D., Professor of Chemistry.
Hermann Irving Schlesinger, Ph.D., Professor of Chemistry.
Ethel Mary Terry-McCoy, Ph.D., Assistant Professor of Chemistry.
John William Edward Glattfeld, Ph.D., Assistant Professor of Chemistry.
Ben H. Nicolet, Ph.D., Assistant Professor of Organic Chemistry.
Mary Meda Rising, Ph.D., Assistant Professor of Chemistry.
William Albert Noyes, Jr., Sc.D., Assistant Professor of Chemistry.
Howard Adler, Ph.D., Instructor in Chemistry.
Herman Bernhard Siems, Ph.D., Instructor and Curator.
Adeline de Sale Link, Ph.D., Instructor in Chemistry.
Thomas Fraser Young, Ph.D., Instructor in Chemistry.
Lillian Eichelberger, Ph.D., Research Instructor in Organic Chemistry.
William Cole Parker, Ph.D., National Research Fellow in Organic Chemistry.
William Almon Mann, S.B., S.M., Research Associate in Physical Chemistry.
Webster Bice Kay, S.B., Lecture Assistant.
William Gustav Friedemann, S.B., S.M., Assistant in Chemistry.
Kenneth Hancock Goode, S.B., Assistant in Chemistry.
Harry Victor Hume, S.B., Assistant in Quantitative Analysis.
Francis Arthur Jenkins, S.B., Assistant in Physical Chemistry.
Barclay Lincoln Jones, Ph.B., Assistant in Chemistry.
Gladys Leavell, S.B., Assistant in Organic Chemistry.
Clemmy Olin Miller, A.B., Assistant in Qualitative Analysis.
Ruth Neuhausen, S.B., Assistant in General Chemistry.
William Lamkin Ray, Ph.D., Assistant in Chemistry.
John Richard Sampey, S.B., S.M., Assistant in Organic Chemistry.
Charles Chapman Snow, S.B., S.M., Assistant in Chemistry.
Nannie Virginia Thornton, A.B., A.M., Assistant in Chemistry.
Edward Staunton West, A.B., Assistant in Chemistry.
Henrietta Lydia Zollman, A.B., Assistant in Chemistry.

Lauder William Jones, Ph.D., Professor and Head of the Department of Chemistry, Princeton University (Summer, 1923).
Raymond D. Mullnix, Ph.D., Professor of Chemistry, Rockford College (Summer, 1923).

FELLOWS, 1923–24

Chang-Kong Chuang, S.B.
William George Guy, S.B., B.A.
Howard Roswald Moore, S.M.
Walter Charles Russell, S.B. (Swift Fellow).
Samuel Bradford Stone, S.B. (Loewenthal Fellow).
Nannie Virginia Thornton, A.B., A.M. (Edith Barnard Fellow).

REQUIREMENTS AND ELECTIVES IN CHEMISTRY

General Organic Chemistry and Qualitative Analysis are now a prerequisite to the medical courses proper. The necessary knowledge of the subject can be obtained from Chemistry 1, 2, 3, 4 (or 4S), and 6, or admission Chemistry and 2S, 3S, 4, and 6.

Organic Chemistry 30 and 31 (2Mjs.), Autumn and Winter Quarters (see below), may be substituted for course 4 (or 4S).

Students who are preparing for the study of Medicine, and who are candidates for a Bacheolor's degree in the University of Chicago, are strongly recommended to take at least two or three majors more of Chemistry, viz., Quantitative Analysis 8 (1Mj.), or 8M (½Mj.), Physical Chemistry 20, and advanced organic Chemistry.

Candidates for a Bachelor's degree who expect to do research work in Physiology or allied medical subjects may with advantage elect further courses from the following: Organic Chemistry 30, 31, 32; Physical Chemistry 60–62; Special Methods of Quantitative Analysis 12–19.

Candidates for a Bachelor's degree may desire to take a major sequence in Chemistry before taking up the professional work of the medical subjects. In such cases the following sequence is advised: Courses 2, 3 (or 2S, 3S), 4S and 33 (4S and 33 in the Summer Quarter), 6, 7, 8, 20 (or 20S), and one other major. If Chemistry is to be the secondary sequence the following courses are advised: 2, 3, 4 (or 4S), 6, 8, and 20.

LABORATORY FEE

There is a laboratory fee of $6.00 per major for all courses involving laboratory work in the Department of Chemistry. A deposit of $5.00 for breakage is also required of each student.

A complete list of the courses of the department will be found in the *Circular* of the Departments of Mathematics, Astronomy, Physics, and Chemistry. The courses listed here are those most likely to have some possible interest to medical students and medical men.

COURSES OF INSTRUCTION

NOTE.—After course 9 the courses are arranged in groups according to subjects: courses 10–19 include courses in Analytical Chemistry, 20–24 in Elementary Physical Chemistry, 25–49 in Organic Chemistry, 50–59 in Inorganic Chemistry, 60–79 in Physical Chemistry and Radioactivity; 80–89 are general in nature, and 90–101 are research courses. Nos. 30–36, 42–45, 50, 51, 55–59, and 75–79 are open to, and suitable for, Senior College students.

I. PRIMARILY FOR THE JUNIOR COLLEGES

1. Elementary General Chemistry: Inorganic I.[1]—Prerequisite: preparatory Physics. DM. Summer, First Term. Classroom, 6 hours a week; laboratory, 12 hours a week, PROFESSOR MULLINIX. Mj. Autumn, Classroom, 3 hours a week; laboratory, 6 hours a week, ASSISTANT PROFESSOR TERRY-MCCOY.

[1] Limited-credit course: After a student has credit for 18 majors but less than 27, these courses will be credited at one-half major each; after he has credit for 27 majors they will not be credited at all.

2. General Chemistry: Inorganic II (continuation of course 1).[1]—Prerequisite: course 1. DM. Summer, Second Term, PROFESSOR MULLINIX. Mj. Winter, ASSISTANT PROFESSOR TERRY-MCCOY

NOTE.—Course 2, Winter Quarter, is a continuation of course 1, but may be entered by those having credit for admission Chemistry.

3. General Chemistry: Inorganic III (continuation of course 2).[1, 2] Prerequisite: course 2. Mj. Spring, ASSISTANT PROFESSOR TERRY-MCCOY.

NOTE.—Courses 1, 2, and 3 are consecutive courses. Separate credit is given for each, but students are advised not to take one course only. The aim of these courses is to give a definite idea of the fundamental principles of chemistry, and not to overburden the student with a mass of unconnected facts. The lectures will be experimental to a considerable extent. The courses are designed to meet the wants, not only of those who wish to go more deeply into chemistry, but of all who wish to study the science as part of a liberal education.

1N. Elements of Chemistry.—Primarily for student nurses. Classroom work, 3 hours a week; laboratory work, 4 hours a week. M. First Term, Spring, 1923, ASSISTANT PROFESSOR RISING.

2S. General Inorganic Chemistry (first course).[1, 2]—For students who have had preparatory Chemistry. Prerequisite: preparatory Chemistry and preparatory Physics, one unit each. DM. Summer, First Term. Classroom, 6 hours a week; laboratory, 12 hours a week, ASSISTANT PROFESSOR TERRY-MCCOY; Mj. Autumn. Classroom, 3 hours a week; laboratory, 6 hours a week, PROFESSOR SCHLESINGER AND DR. LINK.

3S. General Chemistry: Inorganic (continuation of course 2S).[1, 2]—DM. Summer, Second Term, ASSISTANT PROFESSOR TERRY-MCCOY; Mj. Winter, PROFESSOR SCHLESINGER AND DR. LINK.

NOTE.—Whenever, in exceptional cases, the preparation of a student in 2 or 2S justifies it, Qualitative Analysis may be substituted for 3 or 3S.

4. Elementary Organic Chemistry.[1]—Prerequisite: course 3 or 3S. Classroom, 3 hours a week; laboratory, 6 hours a week. Mj. Autumn, ASSISTANT PROFESSOR RISING; Spring, ASSISTANT PROFESSOR GLATTFELD.

4S. General Organic Chemistry.[1]—Prerequisite: course 3 or 3S. Classroom, 5 hours a week; laboratory, 12 hours a week; DM. First Term, Summer, ASSISTANT PROFESSOR GLATTFELD.

6. Qualitative Analysis (introductory course).[1]—The lectures deal with the chemistry of the analytical reactions, and special attention is given to the development and application of the laws of equilibrium and of solutions. This course is, in an important sense, one in advanced General Chemistry. Classroom, 2 hours a week; laboratory, 8 hours a week. Prerequisite: course 3 or 3S. Mj. Summer, DR. LINK; Autumn, DR. YOUNG; Winter, ASSISTANT PROFESSOR RISING.

7. Qualitative Analysis (continuation of course 6).—Mj. or DM. Summer, DR. LINK; Autumn, DR. YOUNG; Winter, ASSISTANT PROFESSOR RISING; Spring, DR. SIEMS.

NOTE.—Courses 6, 7, and 10 form a continuous course, which may be begun in any quarter. The aim of courses 6, 7, and 10 will be to train the student to do intelligent analytical work, based on a knowledge of the scientific principles of the subject, and to apply and amplify his knowledge of General and Physical Chemistry.

[1] The classroom work of courses 1, 2, 3, 2S, 3S, 4, 4S, or 6, may be taken without payment of laboratory fees by graduate students who have had equivalent courses in Chemistry.

[2] Students who receive a sufficiently high grade in the classroom and laboratory work of course 2 or 2S may be excused from the laboratory work of course 3 or 3S. Such students take the lectures of 3 or 3S as a half major and are permitted to take course 4 or 6 simultaneously with the lectures of course 3 or 3S if they so desire.

II. PRIMARILY FOR THE SENIOR COLLEGES

8. Quantitative Analysis (introductory course).—Chiefly laboratory work in gravimetric and volumetric analysis. Laboratory, 8 or 16 hours a week; lecture, 1 hour. Prerequisite: course 7. (May be taken simultaneously with course 6 or 7. Medical students will be admitted to the course after having taken course 6.) Mj. or DM. Summer and Spring, Dr. Young; Autumn and Winter, Assistant Professor Noyes.

8M. Quantitative Analysis.—A special course for premedical and medical students giving the elements of gravimetric and volumetric analysis. Prerequisite: course 6. Summer and Spring, ½Mj. Dr. Young; ½Mj. Autumn and Winter, Assistant Professor Noyes.

9. Quantitative Analysis (continuation of course 8.)—Laboratory, 10 or 20 hours a week. Mj. or DM. Summer and Spring, Dr. Young; Autumn and Winter, Assistant Professor Noyes.

Note.—Courses 8 and 9 form a continuous course which may be begun in any quarter.

10. Advanced Qualitative Analysis (continuation of courses 6 and 7).—Prerequisite: courses 7 and 8. Mj. or DM. Laboratory, 10 or 20 hours a week. Winter, Assistant Professor Rising.

12. Advanced Quantitative Analysis.—Laboratory work 10 hours a week per major, lectures 1 hour per week. Work may be chosen among the following subjects: Water Analysis, Food Analysis, Iron and Steel Analysis, Gas Analysis, Mineral Analysis. ½Mj. or Mj. (or M. or DM. either Term), Summer, Dr. Adler; Mj. Autumn, Assistant Professor Noyes; Winter, Dr. Siems; Spring, Dr. Young. (See note in course 13.)

13. Electrical Methods of Analysis.—Laboratory work 10 hours a week per major and one lecture a week. Electrometric titrations and electrolytic analysis. ½Mj. or Mj. (or M. or DM. either Term), Summer, Dr. Adler; Autumn, Assistant Professor Noyes; Winter, Dr. Siems; Spring, Assistant Professor Terry-McCoy.

Note.—A student may not take more than one and one-half majors of work for credit in courses 12 and 13. One half-major in each course may be taken if desired, under this regulation.

20. Elementary Physical Chemistry.—An introductory survey course in elementary physical chemistry. Lectures, 3 hours; laboratory work, 6 hours. Prerequisite: course 8. Mj. Summer, First Term, Professor Harkins; Second Term, Assistant Professor Noyes; Spring, Assistant Professor Noyes.

24. Introduction to Colloid Chemistry.—An elementary treatment of the main features of colloid chemistry. Lectures, 2 hours a week; laboratory work, 7 hours a week. Prerequisite: Physics 4, Chemistry 8 and 20. Mj. Summer, 1923, Assistant Professor Terry-McCoy.

Note.—The lectures may be taken as one-half major without laboratory work.

III. PRIMARILY FOR THE GRADUATE SCHOOL

30. Organic Chemistry.—Lectures, 3 hours a week; laboratory, 6 hours a week. Prerequisite: Quantitative Analysis 8, and for undergraduate students, Elementary Organic Chemistry (course 4, 4S or an equivalent). Mj. Autumn, Professor Stieglitz.

Note.—Undergraduates must have 18 majors of college credit before they are eligible for admission to course 30 or 31. Students who have had adequate laboratory work in Organic Chemistry are admitted to the lectures of courses 30, 31, 32, or 33, each one-half major, without payment of a laboratory fee.

31. Organic Chemistry (combination of course 30).—Lectures, 3 hours a week; laboratory, 4 hours a week. Mj. Winter, Professor Stieglitz.

32. Organic Chemistry (continuation of course 31).—The aromatic series. Lectures, 2 hours a week; laboratory work, 6 hours a week. Prerequisite: course 31 (course 4 or 4S for medical and home economics students). Mj. Spring, Professor Stieglitz.

33. Organic Chemistry (Advanced).—Fatty and aromatic series. Lectures, 5 hours a week; laboratory, 9 hours a week. Prerequisite: course 4 or 4S, DM. Second Term, Summer, Assistant Professor Glattfeld.

35. Organic Preparations.—Laboratory work, 10 or 20 hours a week. Prerequisite: courses 7 and 9, and Organic Chemistry. Mj. or DM. Summer, First Term, Professor Jones; Second Term, Assistant Professor Nicolet; Mj. Autumn, Assistant Professor Glattfeld; Winter and Spring, Assistant Professor Nicolet.

36. Organic Preparations (continuation of course 35).—Prerequisite: course 35 or its equivalent, and a reading knowledge of German or French. Mj. or DM. Summer, First Term, Professor Jones; Second Term, Assistant Professor Nicolet; Mj. Autumn, Assistant Professor Glattfeld; Winter and Spring, Assistant Professor Nicolet.

Note.—Students who have taken the laboratory work of courses 30 and 31, or 31 and 32, or 31 and 33, will omit course 35 and go on with course 36.

38. Qualitative Organic Analysis.—Prerequisite: courses 32 or 33, and 35 and 36. Mj. Summer, First Term, Assistant Professor Nicolet.

39. Organic Elementary Analysis.—Determinations of carbon, hydrogen, and nitrogen by combustion. Laboratory work, 60 hours. Required of all candidates for the Ph.D. and S.M. (laboratory thesis) in Organic Chemistry. Summer, First Term, Assistant Professor Nicolet; Second Term, Assistant Professor Glattfeld; Autumn, Assistant Professor Glattfeld; Winter, Professor Stieglitz; Spring, Assistant Professor Nicolet.

40. Preparative Organic Chemistry.—Lectures, 2 hours per week. Prerequisite: Qualitative and Quantitative Analysis and Elementary Organic Chemistry. ½Mj. Winter, Assistant Professor Nicolet.

41. Stereochemistry.—Stereochemistry of carbon compounds and nitrogen compounds, including methods of determination of configuration; stereochemical interference. Prerequisite: 2 majors of Organic Chemistry. ½Mj. Assistant Professor Rising. [Not given in 1923–24].

42. Carbohydrates.—½Mj. Spring 1925, Assistant Professor Glattfeld.

43. Organic Nitrogen Derivatives.—Amino acids: polypeptids; uric-acid series; pyridine group; alkaloids; synthetic drugs. Prerequisite: course 31. ½Mj. Winter, 1923, Assistant Professor Rising.

44. Physical Chemistry Applied to Organic Problems.—Lectures, 2 hours a week. Prerequisite: courses 31 and 20, 60 or 61. ½Mj. Spring, Professor Stieglitz.

45. Selected Topics of Organic Chemistry.—Prerequisite: Organic Chemistry. 4 lectures a week. M. Summer, First Term, Professor Jones.

46. Special Topics of Organic Chemistry.—Prerequisite: Organic Chemistry. ½Mj. Assistant Professor Nicolet. [Not given in 1923-24.]

47. Catalysis.—Preparation and use of newer (solid) catalysts and promoters for organic reactions. Prerequisite: courses 11, 32 or 33, 35. Laboratory work, 10 hours a week. Mj. Assistant Professor Terry-McCoy. [Not given in 1923–24.]

48. Electrolytic Processes of Organic Chemistry.—Lectures, 2 hours a week, laboratory, 7 hours a week. Prerequisite: courses 11, 32 or 33, 35. Mj. Assistant Professor Terry-McCoy. [Not given in 1923-24.]

49. The Chemistry of Synthetic Drugs and Related Principles.—Structure and synthesis of typical alkaloids, synthetic drugs, and active principles of internal secretion. Prerequisite: 2 majors of Organic Chemistry. ½Mj. Autumn, 1923, Assistant Professor Rising.

50. Inorganic Preparations.—Laboratory work, 10 or 20 hours a week; classroom work, 2 hours a week. Prerequisite: course 9. Mj., M. or DM. Summer and Autumn, Dr. Siems; Winter, Professor Schlesinger.

51. Inorganic Preparations.—Continuation of 50. Schedule as for 50.

55A, B, C. Advanced Inorganic Chemistry.—A series of half-major lecture courses comprising a systematic course in advanced Inorganic Chemistry from the point of view of recent results and future problems. The groups of the periodic system will be studied critically, and such topics as temperature measurement, thermal analysis, transition points, alloys, will receive detailed treatment. Prerequisite: Elementary Organic Chemistry and Physical Chemistry 20; ½Mj. Winter, PROFESSOR SCHLESINGER.

58. The Constitution of Liquids and Solids: Surface Tensions and Colloids.—Lectures, 2 weekly. ½Mj. Autumn, PROFESSOR HARKINS.

60. Physical Chemistry.—Lectures, 3 hours; laboratory work, 6 hours. Prerequisite: Elementary Physical Chemistry 20 and the Elements of Calculus for undergraduate students; Quantitative Analysis and the Elements of Calculus for graduate students. Mj. Autumn, PROFESSOR HARKINS.

61. Physical Chemistry: Electrochemistry (continuation of course 60).—Hours as in 60. Prerequisite: course 60 or its equivalent and Physics 3 and 4. Lectures. Mj. Winter, PROFESSOR HARKINS.

62. Physical Chemistry: Applications of Thermodynamics and Kinetic Theory (continuation of course 61).—Lectures, 4 hours a week. Prerequisite: course 61 or its equivalent in Physics. Mj. Spring, PROFESSOR HARKINS.

75. Subatomic Phenomena and Radioactivity.—Lectures from the point of view of the structure of atom nuclei. Prerequisite: course 20. ½Mj. Autumn, PROFESSOR HARKINS.

76. Laboratory Course in Radioactivity.—To follow course 75. Limited to 6. ½Mj. Winter, PROFESSOR HARKINS.

82. Club Meetings.—Meetings of the Kent Chemical Society will be held twice a month. They may be attended by anyone interested. The subjects for the meetings will be announced at least one week in advance. Summer, Autumn, Winter, and Spring.

TABULAR VIEW OF THE COURSES OFFERED BY THE DEPARTMENT OF CHEMISTRY, 1923–24, OF INTEREST TO MEDICAL STUDENTS

PART I.—Courses required for the principal sequence in chemistry and courses continued through the year. For laboratory courses and advanced lecture courses see Part II. Junior College courses are in italics; Senior College courses in CAPITALS; Graduate courses in Roman type.

Hour	Summer, 1923	Autumn, 1923	Winter, 1924	Spring, 1924
8:00	4S. *Elementary Organic Chemistry* DM. 1st Term 5 lectures weekly Lab.: M., Tu., W., Th., 1:30–4:30 (Glattfeld) 33. Organic Chemistry (advanced) (Glattfeld) DM. 2d Term Hours as for 4S	2S. *General Inorganic Chemistry I* Mj. (Schlesinger) Lect.:[1] M., Tu., W. Lab.: *a* Tu., W., 9:00–10:00; Th., F., 8:00–10:00 *b* Th., F., 8:00–11:00 (*a* and *b* each limited to 40) *c* W., Th., F., 1:30–3:30 (limited to 40) *d* Th., F., 1:30–4:30 (limited to 40) 7. *Qualitative Analysis II* Mj. (Young) Lect.:[1] Tu., F. Lab.: 8 hrs. per week	3S. *General Inorganic Chemistry II* Mj. (Schlesinger) Schedule as for 2S, Autumn Q. 8. QUANTITATIVE ANALYSIS I Mj. (Noyes) Lect.:[1] Th., at 3:30 Lab.:[2] 8 hrs. weekly 8M. QUANTITATIVE ANALYSIS (for Medical Students) ½Mj. (Noyes) Lect.:[1] Th., at 3:30 Lab.:[2] 8 hrs. weekly 9. QUANTITATIVE ANALYSIS II Mj. (Noyes) Lect.:[1] Tu., at 3:30 Lab.:[2] 8 hrs. weekly	4. *Elementary Organic Chemistry* Mj. (Glattfeld) Lect.: M., Tu., W. Lab.: *a* Th., F., Sat., 8:00–10:00 *b* Th., F., 8:00–11:00 *c* Th., F., 1:30–4:30 *d* W., Th., F., 1:30–4:30 (Secs. *a* and *b* each limited to 30, sec. *c* to 40)
9:00		4. *Elementary Organic Chemistry* Mj. (Rising) Lect.:[1] W., Th., F. Lab.: *a* M., Tu., Sat., 8:00–10:00 *b* M., Tu., 8:00–11:00 *c* M., Tu., 1:30–4:30 (*a*, *b* limited to 30 each, and *c* limited to 40)	7. *Qualitative Analysis II* Mj. (Rising) Lect.: Tu., F. Lab.: 8 hrs.	6. *Qualitative Analysis I* Mj. (Rising) Lect.: M., Tu. Lab.: 8 hrs. per week 20. ELEMENTARY PHYSICAL CHEMISTRY Mj. (Noyes) Lect.: W., Th., F. Lab.: M., Tu., 9:00–12:00 or 1:30–4:30

NOTE.—Laboratory sections in courses 1, 2, 3, 2S, 3S, 4 for which at least 20 students are not registered will be withdrawn.

[1]For additional lectures at the regular period during the first or second week of the quarter, see the Quarterly Time Schedules.

TABULAR VIEW OF COURSES OFFERED BY THE DEPARTMENT OF CHEMISTRY, 1923–24—*Continued*

Hour	Summer, 1923	Autumn, 1923	Winter, 1924	Spring, 1924
10:00				1N. *Chemistry* (Primarily for Student Nurses) M. 1st Term Lect.: M., Tu., W. Lab.: Tu., F., 9:00–11:00 (This course may be withdrawn)
11:00	1. *Elementary General Chemistry I* DM. 1st Term 5 lectures weekly Lab.: M., Tu., W., Th., 1:30–4:30 (Mullinix) 2. *Elementary General Chemistry II* DM. 2d Term Hours as for 1 (Mullinix) 20. Elementary Physical Chemistry Mj. Lect.: W., Th., F. Lab.: M., Tu. 9:00–12:00 or 1:30–4:30 (Harkins, 1st Term) (Noyes, 2d Term)	1. *Elementary General Chemistry I* Mj. (Terry-McCoy) Lect.:[1] W., Th., F. Lab.: *a* M., Tu., W., 1:30–3:30 *b* M., Tu., 10:00–12:00; W., Th., 10:00–11:00 *c* M., Tu., 9:00–12:00 (*a* and *b* together limited to 50; *b* and *c* limited to 30 each; *a* limited to 40) 60.[2] Physical Chemistry I Mj. (Harkins) Lect.: W., Th., F. Lab.: Th., F., 1:30–4:30, or M., Tu., 9:00–12:00	2. *Elementary General Chemistry II* Mj. (Terry-McCoy) Hours as for 1, Autumn Q. (Secs. *b* and *c* limited to 30 each, sec. *a* limited to 40) 61.[2] Physical Chemistry II Mj. Schedule as for 60, Autumn Q.	3. *Elementary General Chemistry III* Mj. (Terry-McCoy) Lect.: W., Th., F. Lab.: *a* M., Tu., 10:00–12:00; W., Th., 10:00–11:00 *b* M., Tu., W., 1:30–3:30 62.[2] Physical Chemistry 3 Mj. (Harkins) 4 lectures per week
1:30	2S. *General Inorganic Chemistry I* DM. 1st Term 5 lectures weekly Lab.: M., Tu., W., Th., 9:00–12:00 (Adler) 3S. *General Inorganic Chemistry II* DM. 2d Term Hours as for 2S (Adler) 6. *Qualitative Analysis I* Mj. (Stieglitz) Lect.:[1] M., Th. Lab.: 8 hrs. weekly 7. *Qualitative Analysis II* Mj. Lect.: Tu.,F. Lab.: 8 hrs	6. *Qualitative Analysis I* Mj. (Young) Lect.: M., Th. Lab.: 8 hrs. weekly	6. *Qualitative Analysis I* Mj. (Young) Hours as for Autumn Q.[1]	7. *Qualitative Analysis II* Mj. (Siems) Lect.: Tu., F. Lab.: 8 hrs. per week

[1] For additional lectures at the regular period in the first or second week of the quarter, see the Quarterly Time Schedule.

[2] Primarily for graduate students. Undergraduates are permitted to enter

TABULAR VIEW OF COURSES OFFERED BY THE DEPARTMENT OF CHEMISTRY, 1923–24—*Continued*

Hour	Summer, 1923	Autumn, 1923	Winter, 1924	Spring, 1924
2:30	8. QUANTITATIVE ANALYSIS I Mj. or DM. (Noyes) Lect.:[1] Th. Lab.: 8 hrs. weekly 8M. QUANTITATIVE ANALYSIS (primarily for Medical Students) ½Mj. or M. (Noyes) Lect.:[1] Th. Lab.:[2] 4 hrs. weekly 9. QUANTITATIVE ANALYSIS II Mj. or DM. (Noyes) Lect.:[1] Tu. Lab.:[2] 8 hrs. weekly	8. QUANTITATIVE ANALYSIS I Mj. (Noyes) See Summer Q. for hours 8M. QUANTITATIVE ANALYSIS (primarily for Medical Students) ½Mj. (Noyes) See Summer Q. for hours 9. QUANTITATIVE ANALYSIS II Mj. (Noyes) Hours as for Summer Q.		8. QUANTATIVE ANALYSIS II Mj. (Young) Hours as in Summer Q. 8M. QUANTITATIVE ANALYSIS (primarily for Medical Students) ½Mj. (Young) Hours as in Summer Q. 9. QUANTITATIVE ANALYSIS II Mj. (Young) Hours as in Summer Q.
3:30				
4:30		30.[3] Organic Chemistry Mj. (Stieglitz) Lect.: M., Tu., W. Lab.: Th., F., 1:30–4:30	31.[3] Organic Chemistry Mj. (Stieglitz) Lect.: W., Th., F. Lab.: M., Tu., P.M., 2 hrs. each day	32.[3] Organic Chemistry Mj. (Stieglitz) Lect.: M., Tu., W. Lab.: Th., F., 2:30–5:30 or 1:30–4:30

[1] For additional lectures at the regular period during the first or second week of the quarter, see the Quarterly Time Schedule.

[2] For consultation hours for laboratory work see Quarterly Time Schedules.

[3] Primarily for graduate students. Undergraduates are permitted to enter.

V. DEPARTMENT OF MATERIA MEDICA, THERAPEUTICS, AND TOXICOLOGY

OFFICERS OF INSTRUCTION

Theodore Tieken, Ph.B., M.D., *Ingals** Professor and Head of the Department of Materia Medica, Therapeutics, and Toxicology.

Bernard Fantus, A.M., M.D., Associate Professor of Therapeutics.

Ralph Waldo Webster, M.D., Ph.D., Associate Professor of Medical Jurisprudence.

William Duncan McNally, M.D., Instructor in Materia Medica and Toxicology.

Robert James Gay, M.D., Instructor in Hygiene and Preventive Medicine.

Daniel Roberts Brower, M.D., Instructor in Practical Therapeutics.

John Stanley Coulter, M.D., Instructor in Physiotherapy.

Charles Otto Carlstrom, G.D., Associate in Kinesitherapy.

INTRODUCTORY

Materia Medica and Pharmacology: Most of the important drugs are discussed in the courses in Pharmacology 21 and 23 at the University. This work will be continued at Rush Medical College by lectures, conferences, and laboratory work.

The course in Hygiene and Sanitation is given to the Senior class and consists of lectures and conferences.

A course in the principles of Therapeutics is given to the Junior class three times a week throughout the Winter Quarter by means of lectures and conferences. One of these hours is devoted chiefly to instruction in prescription-writing from a therapeutic standpoint. The work is continued during the Spring Quarter by means of a conference course with more special reference to individual diseases.

A course in Practical Therapeutics is offered in which the student is personally taught manipulative methods, including Massage, Electricity, Hydrotherapy, etc., and the practical care of the sick.

It is intended that this Department shall supplement the work of the Department of Medicine by dealing more in detail with the technique of treatment.

Any course in Clinical Medicine dealing specifically with Therapeutics, for example, course 23 in the Department of Medicine, may be applied on the required credit in Materia Medica and Therapeutics.

COURSES OF INSTRUCTION

I. JUNIOR YEAR

53. Materia Medica and Therapeutics.—A lecture and conference course dealing with the physical, chemical, and pharmaceutical properties of medicinal agents, their toxicology, and therapeutic application in the treatment of disease. Lectures and conferences. Winter and Spring Quarters. 36 hours. M., Th., F., 8:00–9:00. .6Mj. Professor Tieken and Assistants.

* The *Ingals* Professorship of Therapeutics was founded in 1898 by the late Dr. Ephraim Ingals, by a gift to the college of $25,000 for the promotion of higher education and the advancement of medical science. Dr. Ingals was professor of materia medica and medical jurisprudence in Rush Medical College from 1859 to 1871, and was a member of the Board of Trustees and treasurer of the College for many years.

53A. Materia Medica, Toxicology, and Medical Pharmacy.—A laboratory and conference course supplementary to 53, dealing especially with the practical work in Medical Pharmacy, and Toxicology. Autumn and Spring, Tu., F., 9:00–11:00. 48 hours. .4Mj. Dr. McNally and Assistants.

53B. Toixcology.—An advanced conference and laboratory course dealing with the physical and chemical properties of the more important poisons, their effects and treatment, and their detection. Conferences and laboratory: 60 hours. .8Mj. Hours to be arranged. Dr. McNally.

THERAPEUTICS AND PRESCRIPTION-WRITING

1. The Technic of Medication.—A lecture and demonstration course on the administration of medicines, including practice in prescription-writing. Prerequisite: Pharmacology, course 21. .4Mj. Autumn, M., Th., 11:00–12:00. Associate Professor Fantus.

2. General Therapeutics.—A conference course on therapeutic management; The Therapy of Infection. Prerequisite: Therapeutics I. .4Mj. Spring, M., Th., 8:00. Associate Professor Fantus.

3. Physiotherapy.—A conference and practical course on the methods of physical therapy including methods of reconstruction. Each Quarter, Tu., Fri., 9:00–11:00. 48 hours. .4Mj. Limited to 30 students. Drs. Coulter, Brower, and Assistants.

VI. THE DEPARTMENT OF PATHOLOGY

OFFICERS OF INSTRUCTION

Ludvig Hektoen, M.D., Sc.D., LL.D., Professor and Head of the Department of Pathology; Director of the John McCormick Institute for Infectious Diseases.

Harry Gideon Wells, A.M., Ph.D., M.D., Professor of Pathology; Director of the Otho S. A. Sprague Memorial Institute.

Esmond Ray Long, Ph.D., Associate Professor of Pathology.

Kenneth Fowler, A.B., M.D., Instructor in Pathology.

MEMBERS OF THE OTHO S. A. SPRAGUE MEMORIAL INSTITUTE STAFF

Lydia M. DeWitt, A.M., M.D., Associate Professor of Pathology.

Karl Konrad Koessler, M.D., Ph.D., Associate Professor of Experimental Medicine.

Maud Slye, A.B., Assistant Professor of Pathology.

Julian Herman Lewis, A.M., Ph.D., Assistant Professor of Pathology.

Milton Theodore Hanke, S.B., Ph.D., Assistant Professor of Pathology.

Harry Lee Huber, S.B., Ph.D., M.D.

Mary Eugenie Maver, S.B.,

Jennie Ada Walker, Ph.D.

Edith Farrar, A.B.

Marion Gabriel Frank, S.B.

Barclay L. Jones, Ph.B.

Leo Kempf Campbell, S.B.

Dorothy Sardeson Clark, A.B.

Lauretta Bender, S.M.

AT RUSH MEDICAL COLLEGE

LUDVIG HEKTOEN, M.D., Sc.D., LL.D., Professor and Head of the Department of Pathology.

EDWIN RAYMOND LECOUNT, M.D., Professor of Pathology.

GEORGE HOWITT WEAVER, M.D., Professor of Pathology.

HARRY ALVIN OBERHELMAN, M.D., Associate in Pathology; Resident Pathologist, Presbyterian Hospital.

EDWARD HOWARD HATTON, M.D., Associate in Pathology.

CELESTIN B. SEMERAK, M.D., Fellow in Pathology.

INTRODUCTORY

The courses offered in the University by the Department include the required work in Pathology in the curriculum of the first two years in the study of Medicine, as well as advanced courses arranged for those desiring a more extended knowledge of the subject, and for those wishing to qualify themselves for research.

For each major or double-minor course requiring laboratory work the laboratory fee is $6.00.

THE MASTER'S DEGREE

For the Master's degree a dissertation and eight majors of graduate or Senior College work in Pathology are required, if all the work is in Pathology. Substitution of courses in Bacteriology and Immunity may be made with the approval of the Head of the Department, but courses 1, 2, 3, and at least 3 majors of Research must be taken in Pathology.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Courses required of all candidates are Pathology 1, 2, and at least 3 majors in course 3; also Bacteriology 2, and a course covering the fundamental principles and methods of Immunology. Courses in Hygiene and Bacteriology may be accepted as equivalent to courses in Pathology to a maximum of 5 majors with the approval of the Head of the Department. A dissertation must be presented representing the results of original research under the direction of an officer of the Department, but so conducted as to indicate the ability of the candidate to conduct independent original investigation.

Students wishing to take a minor in Pathology will meet the same requirements as for the Master's degree, except that dissertation is not required.

COURSES OF INSTRUCTION

I. SENIOR COLLEGE COURSES

1. General Pathology and Pathological Histology.—A practical laboratory course in general pathologic histology, supplemented by the study of fresh and museum specimens, and by recitations in general pathology. Prerequisite: Histology, Bacteriology, Physiology, Physiological Chemistry, and Visceral Anatomy. Laboratory, recitations, and lectures: 9 hours a week. Laboratory fee, $6.00. Mj. Autumn, Winter, PROFESSOR WELLS, ASSOCIATE PROFESSOR LONG, DR. FOWLER, AND ASSISTANTS.

2. Pathology of Infectious Granulomas and Tumors.—Laboratory fee, $6.00. Mj. Winter, Spring, PROFESSOR WELLS, ASSOCIATE PROFESSOR LONG, DR. FOWLER, AND ASSISTANTS.

1 and 2 will be given as double-minor courses in the First and Second Terms of the Summer Quarter. Daily 8:00–11:00.

5. Special Pathology.—Supplementary to and paralleling course 2. A study of the pathological changes affecting different organs and tissues. Laboratory fee, $6.00. Mj. Spring, Associate Professor Long, Dr. Fowler, and Assistants.

6. Laboratory Methods in the Diagnosis and Study of Tuberculosis.—Lectures and laboratory work on the bacteriology, pathology, and immunology of tuberculosis. Designed to train students in the general routine laboratory work of tuberculosis sanatoria and for research in tuberculosis. Prerequisite: Bacteriology 2A or 2B. Laboratory fee, $6.00. Limited to 20. Mj. Spring, Associate Professor Long.

II. GRADUATE COURSES

3. Advanced Pathology.—Open to a limited number of students who have credit in general pathology. Laboratory work will be given in pathological technique, the study and recording of autopsies, and special pathological material. Laboratory fee, $6.00. Hours to be arranged for each student. Mj. each Quarter, Professor Wells.

4. Research in Pathology.—Open to a limited number of qualified students and graduates in medicine. Laboratory fee, $6.00 per Mj. Hours to be arranged for each student. Mj. or DMj. each Quarter, Professors Hektoen and Wells, and Associate Professor Long.

III. JUNIOR AND SENIOR COURSES (WEST SIDE)

12. Special Pathologic Anatomy and Histology.—Limited to thirty-six students. Practical instruction is given in the methods of making post-mortem examinations and of recording the results. The student studies and describes the gross and microscopic appearance of diseased organs and tissue. Bacteriologic and chemical methods and experiments are employed whenever indicated and the clinical relations (pathologic physiology) of the morbid conditions are emphasized. *Prerequisite: courses Pathology 1 and 2,* and at least one quarter of clinical work. Daily 2:00–4:00, and autopsies. 144 hours. 1.2Mjs. Summer, Autumn, Winter, and Spring, Professor LeCount and Assistants.

12A. A Continuation of Course 12 for Students Taking Additional Work Along the Same Lines.—Hours to be arranged; two hours daily. 144 hours. 1.2Mj. Autumn, Winter, and Spring, Professor LeCount and Assistants.

13. The Histology and Diagnosis of Tumors.—Prerequisite: courses Pathology 1 and 2. 8:00–10:00. 72 hours. Mj. Autumn, Professor LeCount.

14. Infection and Immunity.—A lecture course. Autumn, Second Term; Wed., Sat., 8:00. 12 hours. .2Mj. Professor Hektoen.

17. Advanced Laboratory Work and Research in Pathology.—Open to a limited number of specially qualified students and graduates in medicine. Hours arranged for each student. Credit given based on time and quality of work. Throughout the year. Professors Hektoen and LeCount.

VIA. THE DEPARTMENT OF HYGIENE AND BACTERIOLOGY

OFFICERS OF INSTRUCTION

Edwin Oakes Jordan, Ph.D., Sc.D., Professor of Bacteriology and Chairman of the Department of Hygiene and Bacteriology.

John Foote Norton, Ph.D., Associate Professor of Bacteriology.

John Casson Geiger, M.D., Dr. P.H., Associate Professor of Epidemiology; Epidemiologist, United States Public Health Service.

Willis Eugene Gouwens, Ph.D., Instructor in Bacteriology.
Noel Paul Hudson, A.B., Instructor in Bacteriology.
Sara Elizabeth Branham, Ph.D., Instructor in Bacteriology.
William John Frederich, S.M., Associate in Bacteriology.
Leland Wilbur Parr, Ph.D., Associate in Bacteriology.
Daniel Allan MacPherson, S.M., Associate in Bacteriology.
William Alfred Starin, A.M., Research Associate in Bacteriology.
Janet Macfarlane Bourn, Ph.B., Assistant in Bacteriology.
Etsuo Yuri, M.D., Assistant in Bacteriology.

Dudley Billings Reed, M.D., Associate Professor of Physical Culture; Health Officer of the University.

Clifford Grosselle Grulee, M.D., LL.D., Associate Professor of Medicine (Pediatrics), Rush Medical College.
William C. Woodward, M.D., Director, Bureau of Legal Medicine and Legislation, American Medical Association.
Alice Hamilton, M.D., Investigator of Occupational Diseases, U.S. Bureau of Labor Statistics.

Wade Wright Oliver, M.D., Professor of Bacteriology, Long Island College Hospital (Summer, 1923).
William Barnard Sharp, M.D., Ph.D., Professor of Preventive Medicine, University of Texas Medical School (Summer, 1923).
William Alfred Starin, A.M., Professor of Bacteriology, Ohio State University (Summer, 1923).

FELLOW, 1923–24

John T. Myers, S.M. (Logan Fellow).

UNDERGRADUATE SEQUENCES

I. PRINCIPAL SEQUENCES

The principal sequence consists of nine majors from the courses offered by the Department. The sequence must be arranged in consultation with the Departmental Adviser.

II. SECONDARY SEQUENCE

To students wishing to take a minor in this Department, six majors from the following courses are recommended: 1, General Bacteriology; 2A, Pathogenic Bacteria; 3, Public Hygiene; 5, Public-Health Problems; 10, Sanitary Aspects of Food Supply (or 11, Water and Water Supply); 12, Public-Health Laboratory Methods; 15, Advanced Bacteriology (2 Mjs.).

GRADUATE WORK

For the Master's degree a dissertation and eight majors of graduate work (including dissertation) in this Department are required. The majors must be selected with the approval of the Head of the Department.

For the degree of Doctor of Philosophy a dissertation presenting the results of original research is required. This research must be conducted under the

direction of the Department. In addition courses 10, 11, 12, 16, and 18 must be satisfactorily completed together with such other courses offered by this or related Departments as may be determined in consultation with the Head of the Department.

When Hygiene and Bacteriology is selected as the minor subject for the Doctor's degree the requirement is substantially the same as for the Master's degree. For requirement when Chemistry is the major subject, see the statement under that Department.

COURSES OF INSTRUCTION

I. JUNIOR COLLEGE COURSES

100. Personal Hygiene.—The elements of normal growth, functions, toleration limits, physical diagnosis, prodromes of disease conditions, and the essentials of personal health maintenance and of corrective therapeutics. For non-medical students. Lectures and demonstrations. M. Summer, First Term, 11:00, M., Tu., W., Th., Professor Sharp.

II. SENIOR COLLEGE COURSES

1. General Bacteriology.—Lectures on the fundamental facts of bacteriology, including brief discussions of the industrial and hygienic applications of bacteriology. Yeasts and molds and several groups of bacteria are studied in the laboratory. Designed for general scientific students. Prerequisite: Chemistry 1, 2, and 3 (or 2S and 3S), and Zoölogy 1 or equivalent. Laboratory fee, $6.00. Mj. Summer, 8:00–10:00, M.–F., First Term, Associate Professor Norton; Second Term, Professor Oliver; Autumn, 1:30–3:30, M.–F., Associate Professor Norton; Spring, 10:00–12:00, M.–F,. Associate Professor Norton.

2A. The Pathogenic Bacteria.—To be taken in sequence to 1 (see description of 2B). Medical credit will be given either for 1 and 2A, or for 2B. Laboratory fee, $6.00. Mj. Summer, 8:00–10:00, M.–F., Mr. Parr; Winter, 10:00–12:00, M.–F., Associate Professor Norton and Miss Branham.

2B. The Pathogenic Bacteria.—Lectures deal with the morphology and biology of bacteria in general and with infection, immunity, and the specific infectious diseases. In the laboratory, students make up bacteriologic media, study some of the more important groups of non-pathogenic and pathogenic bacteria, keep daily records of the biologic changes in cultures under observation, examine water, sewage, milk, pus, saliva, etc., conduct post-mortems on infected animals, and isolate and identify bacteria in mixtures. Those who are not students of medicine will be admitted to this course only by permission of the instructor. Prerequisite: Physiological Chemistry 19. Laboratory fee, $9.00. Hours: lectures, 1:30, M., Tu., W.; laboratory, sec. *a*, 10:00–12:00, M.–F.; sec. *b*, 2:30–4:30, M.–F. No section *b*, in Summer Quarter. Sections limited to 30. 1½Mj. Summer, Mr. Gouwens; Autumn, Mr. Gouwens and Miss Branham; Spring, Associate Professor Norton.

3. Public Hygiene.—The applications of bacteriology to municipal hygiene, water supply, food supply, etc. Prerequisite: Chemistry 1, 2, and 3 (or 2S and 3S); Zoölogy 1 or equivalent. Mj. Summer, 10:00, Tu., W., Th., F., Professor Starin; Mj. Autumn, 10:00, M., Tu., W., Th., Professor Jordan.

5. Public Health Problems.—A lecture course dealing with the infant welfare problem, tuberculosis, and the antituberculosis campaign, venereal diseases and the health of industrial workers. Prerequisite: course 2A or 2B or 3. Mj. Spring, 8:00, M., Tu., W., Th., Associate Professors Norton and Grulee, Drs. Woodward and Hamilton.

III. GRADUATE COURSES

10. Sanitary Aspects of Food Supply.—Lectures and conferences on the bacteriology of foods, including milk, butter, eggs, canned foods, etc.; on food preservation; and particularly on the hygienic aspects of food. Laboratory work includes practical examinations and studies of food micro-organisms. Prerequisites: course 1 or 2B, Chemistry 8 (or 8M). Laboratory fee, $6.00. Mj. Spring, 10:00–12:00, M.–F., Dr. Branham.

11. Water and Water Supply.—Sources of supply and methods of purification. Chemical, bacterial, and microscopical methods. Lectures and laboratory work. Prerequisite: Chemistry 8 (or 8M); course 1 or 2B. Laboratory fee, $6.00. Mj. Summer, 1:30–3:30, Mr. Hudson; Winter, 8:00–10:00, M.–F., Mr. MacPherson.

12. Public Health Laboratory Methods.—Diagnosis of diphtheria, typhoid fever, and rabies; Wasserman test, etc. Prerequisite: course 2A or 2B. Laboratory fee, $6.00. Limited to 25. Mj. Autumn, 11:00–1:00, M.–F., Mr. Frederich; Spring, 1:30–3:30, M.–F., Mr. Frederich.

13. Parasitology.—Animal parasites of man (including protozoa). Prerequisite: course 1 or 2A or 2B. Class is limited to 10. Laboratory fee, $6.00. Mj. [Not given in 1923–24.]

14. Immunity in Relation to Preventive Medicine.—The use of sera, antitoxins, and the like in treating disease; also the use of antibodies, such as agglutinins and opsonins, in the diagnosis of diseased conditions. Prerequisite: course 12. Mj. Winter, 1:30–3:30, M.–F., Dr. Gouwens.

15. Advanced Bacteriology.—Open to a limited number of specially prepared students and to graduates in medicine. Prerequisite: courses 2A or 2B, and 12; Chemistry 8 or 8M. Laboratory fee, $6.00. Mj. each Quarter, Professor Jordan and Associate Professor Norton.

16. Vital Statistics and Epidemology.—Prerequisite: courses 2A or 2B and 3. To be taken with course 18. ½Mj. Winter, 10:00, W., Th., Professor Jordan.

17. School Hygiene.—This course considers the more important problems relating to the individual school child and his environment. It includes discussions of posture, neuro-muscular co-ordinations, physical defects, and some phases of personal hygiene. The heating, lighting, ventilation of schoolhouses, and other facts of the common school life are also taken up. Consideration is given to the questions of school programs, school recreations, communicable diseases, and first aid. Admission to this course is limited to College of Education students and to students taking major or minor sequences in Bacteriology. Mj. Summer, 12:30, M.–Th., Professor Sharp; Winter (at College of Education), 11:00, M.–Th., Associate Professor Reed.

18. Intestinal Bacteriology.—A conference and demonstration course dealing with the problems of intestinal hygiene. This includes the bacteriology of normal intestines and of intestinal diseases, the effect of diet on the intestinal flora, auto-intoxication, Bulgarian milk therapy, etc. To be taken with course 16. Prerequisites: course 2A or 3B. M. Summer, Second Term, 11:00, Tu.–F., Mr. Parr; ½Mj. Winter, 10:00, M., Tu., Mr. Frederich.

19. Sanitary Surveys.—A limited number of advanced students may register with the Head of the Department for the Sanitary Survey of some selected city or town, the work to cover a detailed study of vital statistics, water supply, milk supply, food supply, health administration, and other factors. Registration for this course after consultation only. Mj. each Quarter. By special permission may be taken out of residence. Professor Jordan.

20. Research in Bacteriology.—Laboratory fee, $6.00 per Mj. Mj. or DMj. each Quarter, Professor Jordan and Associate Professor Norton.

IN THE DEPARTMENT OF PATHOLOGY

6. Laboratory Methods in the Diagnosis and Study of Tuberculosis.—Lectures and laboratory work on the bacteriology, pathology, and immunology of tuberculosis. Designed to train students in the general routine laboratory work of tuberculosis sanatoria and for research in tuberculosis. Prerequisite: Bacteriology 2A or 2B. Laboratory fee, $6.00. Limited to 20. Mj. Spring, Lectures, M., 1:30; laboratory, Tu.–F., 1:30–3:3:, Associate Professor Long.

HYGIENE AND BACTERIOLOGY, 1923–24

Hour	Summer, 1923	Autumn, 1923	Winter, 1924	Spring, 1924
8:00	1, 2A		11	1, 5
9:00	1, 2A		11	1
10:00	3, 2B (lab.)	3, 2B (lab. a)	2A, 16, 18	2B (lab. a), 10
11:00	100, 18, 2B (lab.)	12, 2B (lab. a)	2A, 17	2B (lab. a), 10
1:30	11, 2B (lec.)	1, 2B (lec.)	14	1N, 2B (lec.) 12
2:30	11	1, 2B (lab. b)	14	1N, 2B (lab. b) 12
3:30		2B (lab. b)		2B (lab. b)
4:30				
Hours to be arranged	15, 19, 20	15, 19, 20	15, 19, 20	15, 19, 20

VII. DEPARTMENT OF MEDICINE

OFFICERS OF INSTRUCTION

INTERNAL MEDICINE

Frank Billings, Sc.D. (Harv.), M.D., Professor and Head of the Department of Medicine.

Norman Bridge, A.M., M.D., Emeritus Professor of Medicine.

James Bryan Herrick, A.M., M.D.; Bertram Welton Sippy, M.D.; Joseph Leggett Miller, M.D.; Samuel Robert Slaymaker, M.D.; Joseph Almarin Capps, M.D., Professors of Medicine.

Bird McPherson Linnell, M.D.; Wilber E. Post, M.D.; Ernest Edward Irons, M.D., Ph.D.; Rollin Turner Woodyatt, M.D.; Ralph C. Brown, M.D., Associate Professors of Medicine.

Ludwig Mannheimer Loeb, M.D.; James Murray Washburn, M.D.; Alexander Francis Stevenson, M.D.; John Ritter, M.D.; Leon Bloch, M.D.; Ellis Kirk Kerr, M.D.; Karl K. Koessler, M.D., Ph.D.; John L. Jacques, M.D.; George Frederick Dick, M.D.; Donald P. Abbott, M.D; James Richard Greer, M.D., Ph.D.; Arthur Byfield, M.D., Assistant Professors of Medicine.

Harry E. Mock, M.D., Assistant Professor of Medicine (Industrial).

John Hancock McClellan, M.D., Ph.D.; Harry G. Hardt, M.D.; Asher F. Sippy, M.D.; Homer King Nicoll, M.D.; Fred M. Smith, M.D.; Clarence L. Wheaton, M.D.; George Howell Coleman, M.D.; Lee Connell Gatewood, M.D.; Burrell Otto Raulston, M.D.; Frederick Olaf Frederickson, M.D.; Frank Chapman, M.D.; Yale N. Levinson, M.D.; Leland Charles Shafer, M.D.; Abraham Rimmerman, M.D.; John D. Ellis, M.D., Instructors in Medicine.

Lowell Delford Snorf, M.D.; William A. Thomas, M.D.; Fred M. Drennan, M.D.; Frederic W. Burcky, M.D.; Marie G. Ortmayer, M.D.; Carl O. Rinder, M.D.; Nicholas I. Fox, M.D.; Francis Leo Foran, M.D.; Robert Wood Keeton, M.D.; Mabel M. Matthies, M.D.; Ethel Mildred Davis, M.D.; Stephen Pantelis Anthony, M.D.; Ralph W. Trimmer, M.D.; Harry J. Isaacs, M.D., Associates in Medicine.

Emil George Vrtiak, M.D.; Lynn Rogers, M.D.; William Balmer Knox, M.D.; Kamil Schulhof, M.D.; Grant Harrison Laing, M.D.; LeRoy H. Sloan, M.D.; George Oliver Solem, M.D.; Russell C. Johnson, M.D.; Frank Brazzil Kelly, M.D.; Eugene Fagan Traut, M.D.; Carl Wesley Apfelbach, M.D.; Howard Martin Sheaff, M.D.; H. Walden Retan, M.D.; George Morris Curtis, M.D.; (National Research Fellow) Edward Julius Stieglitz, M.D.; (National Research Fellow) Marion Ousley Cole, M.D., Assistants in Medicine.

William George Hibbs, M.D., *Dane Billings Memorial* Fellow in Medicine.

PEDIATRICS

Clifford G. Grulee, A.M., M.D., LL.D., Associate Professor of Medicine (Pediatrics).

Archibald Hoyne, M.D., Associate Professor of Medicine (Pediatrics).

Frank Wesley Allin, M.D.; Walter Fritz Winholt, M.D., Assistant Professors of Medicine (Pediatrics).

August Strauch, M.D.; Oscar Ellis Chase, M.D.; Arthur H. Parmelee, M.D., Instructors in Medicine (Pediatrics).

Cecil Theodore Heidel, M.D.; Charles K. Stulik, M.D.; John Alexander Gardiner, M.D., Associates in Medicine (Pediatrics).

Charles M. Bacon, M.D.; Robert W. Graham, M.D.; Henry Clay Niblack, M.D.; George F. Sutherland, M.D., Ph.D.; Procter Cook Waldo, M.D.; Evelina W. Ehrmann, M.D., Assistants in Medicine (Pediatrics).

NERVOUS AND MENTAL DISEASES

Thor Rothstein, M.D.; Peter Bassoe, M.D., Professors of Medicine (Nervous and Mental Diseases).

Sydney Kuh, M.D.; James Cornelius Gill, M.D.; George Washington Hall, A.M., M.D., Associate Professors of Medicine (Nervous and Mental Diseases).

Josephine Estabrook Young, M.D., Assistant Professor of Medicine (Nervous and Mental Diseases).

John Favill, M.D., Instructor in Medicine (Nervous and Mental Diseases).

Maurice Braude, M.D.; Harry R. Hoffman, M.D.; Loren William Avery, M.D., Associates in Medicine (Nervous and Mental Diseases).

Mary Gritzner Schroeder, M.D., Assistant in Medicine (Nervous and Mental Diseases).

INTRODUCTORY

In this Department instruction is given in the topics usually comprised under the terms Internal Medicine, Pediatrics, and Neurology. Each student is required to complete six majors in the Department of Medicine of which at least one major must be in Pediatrics and .8 major in Nervous and Mental Diseases. The courses specifically required are, in Medicine proper, courses 0, 2, 5 and 6 or 6A; in Pediatrics, courses 1, 4, 4A or 4B, and 7; in Nervous and Mental Diseases, courses 22 or 22A, and either 3D or 21. .3Mj. of course VII-6 is credited to Nervous and Mental Diseases. Attention is called also to the conference courses offered in the Senior year, giving a general review of the clinical subjects (see p. 97).

COURSES OF INSTRUCTION

INTERNAL MEDICINE

JUNIOR YEAR

0. Practice of Medicine.—A conference and recitation course on the essentials of the practice of medicine, designed to afford a general survey of the more important diseases and conditions in preparation for the clinical courses. Limited to 30 students in each section. 36 hours. M., W., F., 8:00. .6Mj. Autumn and Spring, Assistant Professors Stevenson, Greer, Abbott, and Drs. Rinder, Smith, and Drennan.

2. Physical Examination.—A conference and practical course on the methods of physical exploration, chiefly of the normal body. Tu., Th., Sat., 8:00. 36 hours. .3Mj. Autumn and Spring, Dr. Coleman and Others.

5. Laboratory Diagnosis.—A laboratory course in the chemical, microscopic, and bacteriologic examination of blood, urine, sputum, gastric contents, feces, secretions, exudates, etc., and their pathologic and clinical significance, especial attention being given to the acquisition of an accurate technique. Each class limited to 36 students. Autumn and Spring, each Term: sec. *a*, M., W., Th., sec. *b*, Tu., F., Sat., 9:00–11:00. 36 hours. .3Mj. Drs. Nicoll, Raulston, Thomas, and Others.

6. A Clinical Course.—In the Central Free Dispensary each Quarter. In the departments of Internal Medicine, and of Nervous and Mental Diseases, conducted by members of the Department. Prerequisite: Physical and Laboratory Diagnosis. In sections, one quarter for each section. Daily, 9:00–11:00. 144 hours. 1.2Mjs. (.3Mj. of which is in Nervous and Mental Diseases.)

SENIOR YEAR

3A. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Infectious Diseases; Winter: Respiratory Diseases. Limited to 10 students. M., Th., 2:00–4:00. 36 hours. .4Mj. Professor Miller.

3B. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Infectious Diseases; Winter: Respiratory Diseases. Limited to 10 students. Tu., Fri., 2:00–4:00. 36 hours. .4Mj. Professor Capps.

3E. Clinic and Conference Course at the Cook County Hospital.—Topics: Spring: Diseases of the Alimentary Tract and Liver. Limited to 10 students. M., Th., 9:00–11:00. 36 hours. .4Mj. Dr. L. C. Gatewood.

3F. Clinic and Conference Courses at the Cook County Hospital.—Topics: Autumn: Respiratory Diseases; Spring: Diseases of the Heart and Blood Vessels. Limited to 10 students. Wed., S., 11:00–1:00. 36 hours. .4Mj. Assistant Professor Loeb.

3G. Clinic and Conference Course at the Cook County Hospital.—Topics: Spring: Respiratory Diseases. Limited to 10 students. Tu., F., 9:00–11:00. 36 hours. .4Mj. Associate Professor Irons.

3H. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn and Spring: Diseases of the Blood and Ductless Glands. Limited to 10 students. Tu., R., 2:00–4:00. 36 hours. .4Mj. Assistant Professor Byfield.

3J. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn and Spring: Cardio-vascular and Renal Diseases. Limited to 10 students. Tu., F., 11:00–1:00. 36 hours. .4Mj. Assistant Professor Kerr.

3K. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Nephritis and Allied Conditions. Limited to 10 students. Tu., Fri., 2:00–4:00. 36 hours. .4Mj. Assistant Professor Koessler.

3L. Clinic and Conference Course at the Cook County Hospital.—Summer: Advanced Hematology. Limited to 5 students. Tu., 2:00–4:00. 24 hours. .2Mj. Assistant Professor Byfield.

3R. Clinic and Conference Course at the Cook County Hospital.—Winter and Spring: Tuberculosis, Tu. and F., 2:00–4:00. Limited to 10 students. 48 hours. .4Mj. Dr. George Coleman.

3S. Clinic and Conference Course at the Lutheran Deaconess Hospital, 1138 North Leavitt Street.—Autumn and Spring, Diagnostic Methods. Limited to 10 students. Wed., Sat., 9:00–11:00. 48 hours. .4Mj. Assistant Professor Jacques.

3W. Clinic and Conference Course at the Michael Reese Dispensary, corner Maxwell and Morgan Streets.—Topic: Diseases of the Gastro-intestinal tract. Tu., Fri., 11:00–1:00. 48 hours. .4Mj. Each Quarter. Assistant Professor Bloch.

***6A. Clinical Course in the Presbyterian Hospital.**—Senior students will be assigned each Quarter to the medical services in the Presbyterian Hospital for a period of one quarter, to serve daily as clinical clerks and laboratory assistants. Each student so assigned will serve in the clinical laboratory of the hospital and in the wards from 9:00–11:00 daily. 144 hours. 1.2Mjs. Assistant Professor Dick, Drs. Shafer and Apfelbach.

6B. Clinical Course at the Central Free Dispensary.—Topic: Diabetes. Limited to two students. Prerequisites: Course 6 or 6A. Each Quarter, Th., 9:00–11:00. .2Mj. Associate Professor Woodyatt and Dr. Keeton.

6C. Clinical Course at the Central Free Dispensary.—Topic: Diseases of the Heart and Blood Vessels. Limited to four students. Prerequisites: same as for 6B. Each Quarter, M., Th., 9:00–11:00. .4Mj. Professor Slaymaker and Drs. Fred M. Smith, Chapman, Stutik and Bacon.

6D. Clinical Course at the Central Free Dispensary.—Topic: Diseases of the Alimentary Tract. Limited to two students in each section. Prerequisites: same as for 6B. Each Quarter, M., Th., 9:00–11:00. .4Mj. Section *a*, Assistant Professor Abbott; Section *b*, Dr. L. C. Gatewood; Section *c*, Dr. Marie Ortmayer.

6E. Clinical Course at the Central Free Dispensary.—Topic: Diseases of the Kidney. Limited to two students. Prerequisites: same as for 6B. Each Quarter, W., S., 9:00–11:00. .4Mj. Drs. Rinder, Schulhof and Stieglitz.

JUNIOR OR SENIOR YEAR

9. Clinical Medicine.—A clinic and conference course in medicine, M., Th., 9:00–11:00. 48 hours. .4Mj.

Summer: General Medicine with special reference to Diseases of the Alimentary Tract. Assistant Professor Abbott.

Autumn: General Medicine with special reference to Diseases of the Blood and Ductless Glands. Assistant Professor Washburn.

Winter: General Medicine with special reference to Metabolic Aspects of Disease. Associate Professor Woodyatt.

* Each student is required to purchase or rent for this course a microscope, and to purchase a hemocytometer and a Talquist scale or some other hemoglobinometer.

Spring: General Medicine with special reference to Diseases of the Kidney, Heart, and Blood Vessels. Associate Professor Post.

11. Clinical Medicine.—A clinical and conference course in medicine. Tu., F., 9:00–11:00. Each course 48 hours. .4Mj.

Summer: General Medicine with special reference to Diseases of the Blood, Ductless Glands, and Metabolism. Assistant Professor Greer.

Autumn: General medicine with special reference to Diseases of the Heart and Blood Vessels. Professor Herrick.

Winter: General Medicine with special reference to Infectious Diseases and Diseases of the Respiratory Tract. Associate Professor Irons.

Spring: General Medicine. Professor Herrick and Associate Professor Irons.

11A. A clinical and demonstration course in Diseases of the Heart and Blood Vessels, including Electrocardiography. Limited to 8 students. Tu., F., 9:00–11:00. 48 hours. .4Mj. Mj. Spring, Dr. Fred M. Smith.

13. Clinical Medicine.—A clinical and conference course in medicine. W., Sat., 9:00–11:00. Each course 48 hours. .4Mj.

Summer: General Medicine with special reference to Diagnosis. Dr. Drennan.

Autumn: Tuberculosis in its various aspects, pulmonary, glandular, abdominal, etc., and covering diagnosis, therapy, hygienic principles, and sociology. Assistant Professor Ritter and Dr. Wheaton.

Winter: General Medicine with special reference to Diseases of the Alimentary Tract. Professor Sippy.

Spring: General Medicine with special reference to Diagnosis. Associate Professor Ralph C. Brown.

23. Therapeutic Clinic.—A medical clinic at the Cook County Hospital, with special reference to Therapeutics. Prerequisite: course III-53. Autumn, Winter, Spring Quarter, W., 7:00–9:00 p.m. 24 hours. .2Mj. Dr. L. C. Gatewood.

27. Industrial Medicine.—A clinical and conference course dealing with the Human Maintenance Department in the Industries, including preventive medicine, etc. For details see special bulletin. Limited to 10 students. Tu. and F., 7:00–9:00 p.m. 48 hours. .4Mj. Assistant Professor Mock, Drs. Ellis, Levinson, and Others.

33. Variola (extra-mural).—A clincial course in Variola, at the Chicago Isolation Hospital, at intervals as material is afforded. Classes limited to 10. each. .2M. Associate Clinical Professor Heman Spalding or Assistant Professor Hoyne.

36. Clinical Diagnosis Course.—Advanced work in Clinical Diagnosis, etc. Limited to 4 students. W., 9:00–11:00. 24 hours. .3Mj. Summer, Winter, Spring Quarter, by arrangement in advance, Associate Professor Linnell.

GRADUATE COURSES IN MEDICINE

A limited number of graduates will be accepted for work in General Medicine. For the present the course may be for either one or two years. Applicants must be approved by a department Committee. For particulars apply to Professor James B. Herrick.

PEDIATRICS

1. The Principles of Pediatrics.—A conference and recitation course comprising the anatomy, physiology, and hygiene of infancy and childhood, the dietetics of infancy and childhood and the commoner diseases of infancy and childhood. Prerequisite to every other course in pediatrics. Limited to 40 students. Autumn, Tu., Fri., 8:00, Dr. Stulik. Spring, sec. *a*, M., Th., 8:00, Dr. Parmelee; sec. *b*, Tu., Sat., 8:00, Assistant Professor Winholt; sec. *c*, Tu., Sat., 8:00, Dr. Gardiner. 24 hours. .4Mj. (Courses 1 and 7 may be taken in the same Quarter.)

4. Contagious Diseases.—A conference and recitation course on contagious diseases. No limit in attendance. Spring and Autumn, F., 8:00–9:00 A.M., once a week for six weeks. ASSOCIATE PROFESSOR HOYNE. .1Mj.

4A. Clinical Course in Contagious Diseases.—A clinic at the Durand Hospital. Six sections of 3 students each. One hour a week for one Quarter. Sec. *a*, M., 8:00–9:00; sec. *b*, Tu., 8:00–9:00; sec. *c*, Wed., 8:00–9:00; sec. *d*, Th., 8:00–9:00; sec. *e*, F., 8:00–9:00; sec. *f*, Sat., 8:00–9:00. PROFESSOR WEAVER. .1Mj.

4B. Clinic on Contagious Diseases.—Clinic in Contagious Department of Cook County Hospital. 2 hours a week for one term. Autumn, Winter, and Spring quarters. Limited to 10 students in each section. Sat., 11:00–1:00. ASSOCIATE PROFESSOR HOYNE. .1Mj.

7. Dispensary and Ward Work.—A required course in the Central Free Dispensary and Presbyterian Hospital. Each section limited to 12 students. Sec. *a*., M., Th., 9:00–11:00, Central Free Dispensary, DRS. HEIDEL AND WALDO. Wards Presbyterian Hospital, DR. GARDINER. Sec. *b*, Tu., F., 9:00–11:00, Central Free Dispensary, DRS. STULIK AND SUTHERLAND; Wards Presbyterian Hospital, DR. GRAHAM. Sec. *c*, Wed., Sat., 9:00–11:00, Central Free Dispensary, ASSISTANT PROFESSOR WINHOLT AND DR. EHRMANN; Nutritional Clinics Central Free Dispensary, ASSISTANT PROFESSOR ALLIN, DRS. CHASE AND HEIDEL. 48 hours. .4Mj.

12. Pediatric Clinic.—A clinic and conference course at the Presbyterian Hospital. Tu., F., 9:00–11:00. 48 hours. Limited to 25 students. Summer, ASSISTANT PROFESSOR WINHOLT; Autumn, Winter, and Spring, ASSOCIATE PROFESSOR GRULEE. Each Quarter there will be given two clinical periods in Diseases of the Heart in Children, DR. GARDINER; one period on Nephritis in Children, DR. RINDER; one period on congenital syphilis, DR. SUTHERLAND. .4Mj.

14. Pediatric Clinic.—A clinic and conference course at the Presbyterian and Cook County hospitals. M., Th., 9:00–11:00. 48 hours. Limited to 15 students. Autumn and Winter quarters, ASSISTANT PROFESSOR WINHOLT. .4Mj.

15. Nutrition Clinics.—A clinical and conference course at the Central Free Dispensary. Post-natal clinic, DR. CHASE. The Feeding and Care of Older Children (2 to 6 years of age), DR. HEIDEL. The Feeding and Care of Older Children (6 to 16 years of age), ASSISTANT PROFESSOR ALLIN, Wed., Sat., 9:00–11:00. 48 hours. Each Quarter. Limited to 5 students. .4Mj.

16. Pediatric Clinic at the Cook County Hospital.—A clinic and conference course at the Cook County Hospital. Limited to 10 students. Each Quarter, excepting the Autumn, F., 7:00–9:00 P.M. 24 hours. DR. STRAUCH. .2Mj.

17. Pediatric Clinic at St. Luke's Hospital.—A clinical and conference course at St. Luke's Hospital. Limited to 10 students. Summer and Winter. Tu., 9:00–11:00. 24 hours. DR. PARMELEE. .2Mj.

GRADUATE COURSE IN PEDIATRICS

A limited number of graduates will be accepted for work in Pediatrics. The course will be for two years. Applicants must have had at least one year's interneship in a creditable hospital and must be approved by a department Committee. For particulars apply to Professor Clifford G. Grulee.

NERVOUS AND MENTAL DISEASES

3D. Diseases of the Nervous System.—A clinical and conference course in Cook County Hospital. Limited to 10 students. M., Th., 9:00–11:00. 48 hours. .4Mj. Autumn, Winter, Spring, DR. FAVILL.

19. Clinical Psychiatry.—Demonstration and Conference Course, Psychopathic Hospital. Prerequisite course 22 or 22A. Mon., 4:00–6:00. 24 hours.

.2Mj. Limited to 10 students. Autumn, Winter, and Spring, Associate Professor Kuh.

19A. Pathology of the Nervous System.—A demonstration, clinical, and conference course, including discussion of symptoms depending upon various pathologic changes in the nervous system. Prerequisite: one clinical course in Nervous Diseases. Tu., F., 8:00. 24 hours. .4Mj. Autumn and Winter, Professor Rothstein.

21. Diseases of the Nervous System.—A clinical and conference course. Limited to 40 students. M., Th., 9:00–11:00. 48 hours. .4Mj. Summer, Professor Bassoe; Autumn, Associate Professor Hall; Winter, Associate Professor Gill; Spring, Professors Rothstein and Bassoe.

22. Psychiatry.—A chemical and conference course at the Cook County Hospital. Topic: Insanity. M., 4:00–6:00. 24 hours. .2Mj. Autumn and Winter, Associate Professor Kuh and Dr. Braude.

22A. A Clinical and Conference Course in Psychiatry at the Cook County Psychopathic Hospital.—Spring, Tu., 9:00–11:00. 24 hours. .2Mj. Associate Professor Hall.

VIII. DEPARTMENT OF SURGERY

OFFICERS OF INSTRUCTION

Arthur Dean Bevan, M.D., *Nicholas Senn* Professor* and Head of the Department of Surgery.

William Thomas Belfield, M.D., Professor of Surgery (Genito-urinary).

Dean DeWitt Lewis, M.D., Sc.D., LL.D., Professor of Surgery.

Charles Aubrey Parker, M.D., Associate Professor of Surgery (Orthopedic).

Carl Braden Davis, M.D.; Dallas B. Phemister, M.D., Associate Professors of Surgery.

Paul Oliver, M.D.; George Gilbert Davis, M.D.; Kellogg Speed, M.D.; Vernon Cyrenius David, M.D.; Gatewood, M.D.; Albert Horr Montgomery, M.D., Assistant Professors of Surgery.

Frederick Brown Moorehead, M.D., D.D.S., Assistant Professor of Surgery (Oral and Dental).

Isabella Herb, M.D., Assistant Professor of Surgery (Anesthetics).

Robert Harry Herbst, M.D.; Herman Louis Kretschmer, M.D., Assistant Professors of Surgery (Genito-urinary).

Edward James Lewis, M.D.; Franklin B. McCarty, M.D.; Edwin Morton Miller, M.D.; Golder L. McWhorter, M.D., Ph.D.; William McMicken Hanchett, M.D.; Instructors in Surgery.

Cassie Bell Rose, M.D., Instructor in Surgery (Radiology).

Hugh J. Polkey, M.D., Associate in Surgery (Genito-urinary).

Jacob Myers, M.D.; Elvin J. Berkheiser, M.D., Associates in Surgery (Orthopedic).

Hillier L. Baker, M.D.; Jay Ireland, M.D., Ernest Charles McGill; Henry Hoyt Cox, M.D., Assistants in Surgery.

Thomas Cottrell, M.D.; Walter Thomas Venn, M.D.; Melbourne Clements, M.D., Assistants in Surgery (Genito-urinary).

* The *Nicholas Senn* Professorship was founded in 1898 by the late Professor Nicholas Senn, with a gift to the college of $25,000 for the promotion of higher medical education and the advancement of medical science. He was professor of the principles of surgery in Rush Medical College from 1889 to 1891 and professor of surgery from 1891 to 1908.

Frances Haines, M.D., Assistant in Surgery (Anesthetics).

Francis Howe Straus, M.D., *Nicholas Senn* Fellow in Surgery; Assistant House Surgeon, Presbyterian Hospital.

———, *Thompson-Bevan* Fellow in Surgery; Assistant House Surgeon, Presbyterian Hospital.

William John Gallagher, M.D., *Frances A. Hardy* Fellow in Surgery; Assistant House Surgeon, Presbyterian Hospital.

EXTRA-MURAL INSTRUCTORS

Daniel N. Eisendrath, M.D., Clinical Professor of Surgery (Genito-urinary), Cook County Hospital.

Hugh McKenna, M.D., Assistant Clinical Professor of Surgery, Cook County Hospital.

Roger Throop Vaughan, M.D., Assistant Clinical Professor of Surgery, Cook County Hospital.

David C. Strauss, M.D., Assistant Clinical Professor of Surgery, Cook County Hospital.

INTRODUCTORY

A total of 5 majors in surgery is required. The following subjects are prerequisite to other courses and to final examination: Surgery Anatomy and Operative Surgery on the Cadaver, .4; Principles of Surgery and Surgical Pathology, 1; Clinic and Conference Courses, including one course on each of the divisions of Regional Surgery: (*a*) Head, Neck, and Thorax; (*b*) Abdomen; (*c*) Extremities, 1.2; Genito-urinary, .4; Orthopedic, .4; Surgical Dispensary, .4; Operative Surgery on Animals, .2; Presbyterian Hospital Ward Work, .4; anesthetics, .1. An optional .5 major, elected as the student desires, and devoted either to laboratory or to clinical work, is recommended..

COURSES OF INSTRUCTION

I. JUNIOR YEAR

1. Principles of Surgery and Surgical Pathology.—A conference and laboratory course. M., Th., 11:00–1:00. 36 hours. .5Mj. Autumn and Spring, Associate Professor Phemister, Assistant Professor Gatewood, and Drs. Miller, McWhorter, Hanchett, and Straus.

2. Principles of Surgery and Surgical Pathology.—A conference and laboratory course. 36 hours. .5Mj. Winter, M. and Th., 11:00–1:00; Summer, M. and Th., 11:00–1:00, Associate Professor Phemister, Assistant Professor Gatewood, and Drs. Miller, McWhorter, Hanchett, and Straus.

3. Surgical Anatomy and Operative Surgery on the Cadaver.—A demonstration and operative course. Sec. *a*, M., Th., 11:00–1:00; sec. *b*, Tu., F., 11:00–1:00. 48 hours. .4Mj. Winter and Spring, Assistant Professors Gatewood, Montgomery, Drs. McCarty, McWhorter, Miller, and Hanchett.

5. Clinical Surgery (Central Free Dispensary).—Including bandaging, surgical dressings, and surgical appliances. Daily, 11:00–1:00. 48 hours. .4Mj. Each Quarter throughout the year. Sec. *a*, M., Th.; sec. *b*, Tu., F.; sec. *c*, W., Sat. Each section limited to 12 students. Assistant Professor Montgomery, Drs. Miller, McWhorter, Ireland, Cox, McGill, Baker, and Straus.

This course may be elected by Junior students after one quarter's residence in the clinical years during which other courses in surgery have been taken.

14. Orthopedic Surgery.—A clinical course at the Home for Crippled Children, 1653 Park Avenue, Summer, Autumn, Winter, and Spring. 48 hours. .4Mj. Sec. *a*, M., Th, 2:00–4:00; sec. *b*, Tu., F., 2:00–4:00; sec. *c*, W., Sat., 2:00–4:00, Associate Professor Parker and Drs. Myers and Berkheiser.

II. JUNIOR AND SENIOR YEARS

6. Clinical Surgery.—A clinical and conference course in general surgery, with special reference to and examination in the surgery of the abdomen. This course includes instruction in the administration of anesthetics. 11:00–1:00, M. and Th., Tu. and F., 48, 60, or 96 hours. .4, .6, or .8Mj. Autumn, Professor Bevan, Professor Lewis, Associate Professors Carl B. Davis, Phemister, Assistant Professors David and Speed.

8. Clinical Surgery.—A clinical and conference course in general surgery, with special reference to and examination in the surgery of the head, neck, and thorax. This course includes instruction in the administration of anesthetics. M. and Th., Tu. and F., 11:00–1:00. 48, 60, or 96 hours. .4, .6, or .8Mj. Winter, Professor Bevan, Professor Lewis, Associate Professors Carl B. Davis, Phemister, Assistant Professors David and Speed.

10. Clinical Surgery.—A clinical and conference course in general surgery, with special reference to and examination in surgery of the extremities. This course includes instruction in the administration of anesthetics. M., Tu., Th., and F., 11:00–1:00. 48, 60, or 96 hours. .4, .6 or .8Mj. Spring, Professor Bevan, Professor Lewis, Associate Professors Carl B. Davis, Phemister, Assistant Professors David and Speed.

12. Clinical Surgery.—A clinical and conference course in general surgery. This course includes instruction in the administration of anesthetics. M., Tu., Th., and F., 11:00–1:00. 48, 60, or 96 hours. .4, .6, or .8Mj. Summer, Professor Bevan, Professor Lewis, Associate Professors Carl B. Davis, Phemister, Assistant Professors David and Speed.

Laboratory and research work in surgical pathology may be elected by a limited number of students in the laboratories of Professor Bevan, and credit in proportion to the character and length of course may be granted, but not to exceed in any one quarter .4Mj.

12A. Clinical Course in the Presbyterian Hospital.—Thirty-six students will be assigned to the clinical services in the hospital. Each Quarter. 48 hours. .4Mj. Sec. *a*, M. and Th.; see *b*, Tu. and F.; sec. *c*, W. and Sat.

16. Practical Course in Operative Surgery on Animals.—Given to the class in sections. Limited to 32 students. Sec. *a*, M., 11:00–1:00; sec. *b*, F., 11:00–1:00. 24 hours. .2Mj. Summer and Autumn, Assistant Professors David, Gatewood, Montgomery, and Drs. Miller, McCarty, McWhorter, and Hanchett.

17. Genito-urinary Diseases (Central Free Dispensary).—A clinical and conference course in diseases of the genito-urinary tract. Sec. *a*, M., Th.; sec. *b*, Tu., F.; sec. *c*, W., Sat., 4:00–6:00. 48 hours. .4Mj. Summer, Autumn, Winter, and Spring, Assistant Professors Herbst and Kretschmer, and Drs. Polkey, Cottrell, Venn, and Clements.

18. Clinical Course at the Cook County Hospital.—Class limited to 10 students. Tu., 11:00–1:00. 24 hours. .2Mj. Autumn, Winter, and Spring, Assistant Clinical Professor D. C. Strauss.

19. Clinical Course at the Cook County Hospital.—Topic: Fractures, for one quarter; Surgery of Children, for one quarter. Tu., 2:00–4:00. 24 hours. .2Mj. Autumn, Winter, Spring, Assistant Professor Kellogg Speed.

20. Clinical Course at the Cook County Hospital.—Class limited to 10 students. F., 11:00–1:00. 24 hours. .2Mj. Autumn and Winter, Assistant Professor David; Summer and Spring, Dr. E. J. Lewis.

21. Clinical Course at the Cook County Hospital (Genito-urinary).—W., 2:00–4:00. 24 hours. .2Mj. Summer, Autumn, Winter, and Spring, Clinical Professor Eisendrath.

22. Clinical Course at the Cook County Hospital.—Class limited to 20 students. Tu., 7:00–9:00 p.m. 24 hours. .2Mj. Each Quarter. Assistant Clinical Professor Vaughan.

23. Clinical Course at the Cook County Hospital.—Wed., 4:00–6:00. 24 hours. .2Mj. Autumn, Winter, and Spring, Assistant Professor Geo. G. Davis.

24. Clinical Course at the Cook County Hospital.—Class limited to 20 students. W., 7:00–9:00 p.m. 24 hours. .2Mj. Autumn, Winter, and Spring, Assistant Professor Oliver.

25. Orthopedic Clinic at the Cook County Hospital.—Clinical course, with special reference to the orthopedic affections of adults. Mon., 2:00–4:00. 24 hours. .2Mj. Each Quarter, Associate Professor Parker.

26. Clinical Course at the Cook County Hospital.—Class limited to 10 students. Autumn and Winter, Tu., 4:00–6:00. 24 hours. .2Mj. Assistant Clinical Professor Hugh McKenna.

27. Clinical Course at the Cook County Hospital.—Class limited to 20 students. Autumn, Winter, Spring, Wed., 11:00–1:00. 24 hours. .2Mj. Assistant Clinical Professor Vaughan.

30. Anesthetics.—A conference and demonstration course on the administration of anesthetics. Sat., 2:00. .1Mj. Autumn and Spring, Second Term, Assistant Professor Herb.

33. Roentgenology.—A conference and demonstration course on the use of the X-ray in diagnosis and treatment, and on the general principles of radiographic technique. Limited to 25 students. W., 2:00–4:00. .2Mj. Autumn, Winter, and Spring, First Term, Dr. Rose.

34. Genito-urinary Surgery.—A clinical and conference course in diseases of the genito-urinary tract. W., 11:00–1:00. 24 hours. .2Mj. Autumn, Assistant Professors Herbst and Kretschmer.

35. Oral and Dental Surgery.—A clinical and conference course on the surgery of the mouth and teeth. W., 11:00–1:00. 24 hours. .2Mj. Winter, Assistant Professor Moorehead.

III. POSTGRADUATE

29. Operative Surgery for Postgraduates.—On dogs, surgery of the abdomen. On the cadaver, surgery of the head, neck, thorax, and extremities. Four weeks, beginning July 1 and August 1. M., W., F., 4:00–6:00. Other days or months by special arrangement. Four or 8 men. Fee, $100.00. Dr. McWhorter.

IX. DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

OFFICERS OF INSTRUCTION

John Clarence Webster, M.D., F.R.C.P. (Edin.), Professor Emeritus of Obstetrics and Gynecology.

Noble Sproat Heaney, M.D., Associate Professor and Acting Head of the Department of Obstetrics and Gynecology.

Rudolph Wieser Holmes, M.D., Associate Professor of Obstetrics and Gynecology.

Carey Culbertson, M.D., W. George Lee, M.D.; Joseph L. Baer, M.D.; William Francis Hewitt, S.B., M.D., Assistant Professors of Obstetrics and Gynecology.

Julius Ernest Lackner, M.D., Instructor in Obstetrics and Gynecology.

Frederick William Rohr, M.D.; Aaron Elias Kanter, S.M., M.D.; Kathleen Regan Harrington, S.B., M.D., Associates in Obstetrics and Gynecology.

Aldo K. Germann, S.B., M.D.; George Fielding Hibbert, M.D.; L. Wade Martin, M.D.; Gerritt Cotts, M.D.; Edward Dudley Allen, M.D., Assistants in Obstetrics and Gynecology.

INTRODUCTORY

The subjects of Obstetrics and Gynecology are taught in the Junior and Senior years in recitation, and conferences courses, in Dispensary and Hospital clinics, and in the conduct of labor in the homes of patients. The total requirement is 3 majors, at least 2 majors of which must be taken in obstetric courses and .6 major in Gynecology.

COURSES OF INSTRUCTION

JUNIOR YEAR

1. Conference and Demonstration Course in Obstetrics and Gynecology.—The female pelvis and genitalia, puberty and menstruation, anatomy, physiology, the diagnosis of pregnancy, management of normal pregnancy, physiology and clinical course of normal labor, and the puerperium, mechanism in vertex presentations. Limited to 35 students in each section. Autumn and Spring, Wed., Sat., 11:00–1:00. .6Mj. (.4 Obstetrics). Assistant Professors Baer and Hewitt, and Drs. Lackner, Rohr, Martin, Hibbert, and Cotts.

2. Conference and Demonstration Course in Obstetrics.—Mechanism in face, brow, pelvic, and shoulder presentations, the new-born child, multiple pregnancy, obstetric operations and manipulations, induced termination of pregnancy, forceps, version, operations for enlarging the pelvic diameters, caesarean section, embryotomy, manikin demonstrations. Prerequisite: Course 1. Limited to 35 students in each section. Winter, Spring, and Summer Quarters, Wed., Sat., 11:00–1:00. .6Mj. Assistant Professor Baer, and Drs. Rohr, Lackner, Martin, Harrington, and Kanter.

3. Conference Course in Obstetrics.—Pathology of pregnancy, the toxemias, ectopic gestation, premature expulsion and diseases of the ovum, pathology of labor, anomalies of expellent forces, soft passages, bony pelvis and fetus, the hemorrhages, injuries of birth canal, prolapse of cord, pathology of puerperium, diseases and abnormalities, sepsis. Prerequisite: Course 2. Spring for Juniors, Associate Professors Holmes; Autumn for seniors, Assistant Professors Hewitt and Baer, Drs. Rohr, Harrington, and Cotts, Tu., F., 4:00–6:00. .6Mj.

3A. Conference and Clinical Courses in Obstetrics at the Cook County Hospital.—Tu., F., 2:00–4:00. 48 hours. .4Mj. Autumn, Winter, and Spring, Assistant Professor Lee.

5. Clinical Obstetrics.—In the maternity department of the Presbyterian Hospital, Chicago Lying-in Dispensary, Central Free Dispensary, and Michael Reese Hospital. Attendance upon cases of confinement in various hospitals and at the homes of patients is required of each student before graduation. Each student will be summoned to cases at the time of delivery and will attend the patients during and after delivery under supervision. Clinical records must be

kept by students and certificates obtained. Prerequisite: courses 1, 2, and 3. .4Mj. Throughout the year. Associate Professor Heaney, Assistant Professor Hewitt, and Drs. Rohr and Kanter. *Nurses*: Mabel W. Hubbard and Ellen Pehrson.

6. Conference and Demonstration Course.—A gross and microscopic study of the female genitalia, both normal and pathologic, including the changes found in menstruation and in pregnancy. Limited to 15 students. Each Quarter, Wed., Sat., 11:00–1:00. 48 hours. .4Mj. (Obstetrics .2Mj.; Gynecology .2). Prerequisite to course 10. Assistant Professors Culbertson and Hewitt, and Drs. Rohr, Kanter, and Harrington.

8. Dispensary Clinics.—Conferences in practical gynecology. Prerequisite: course 1 or 6. Limited to 6 in each section. 24 hours. .4M. Each Term throughout the year. Sec. *a*, M., Th., 11:00–1:00; sec. *b*, Tu., F., 11:00–1:00; sec. *c*, W., Sat., 11:00–1:00.

SENIOR YEAR

9. College Clinics.—In Gynecology and Obstetrics. Prerequisite: course 1 or 6. 48 hours. .4Mj. (Obstetrics .2Mj.; Gynecology .2). Each Quarter throughout the year. W., Sat., 11:00–1:00, Associate Professor Heaney and Assistant Professor Culbertson.

10. Clinical Course at the Cook County Hospital.—A clinical course in Gynecology. Limited to 15 students. Tu., F., 11:00–1:00. 24 hours. .4Mj. Gynecology. Autumn, Winter, and Spring, Assistant Professor Culbertson.

11. Special Laboratory Work.—For a limited number of students selected by the Department staff.

X. DEPARTMENT OF LARYNGOLOGY AND OTOLOGY

OFFICERS OF INSTRUCTION

John Edwin Rhodes, A.M., M.D.; George Elmer Shambaugh, Ph.B., M.D.; Professors of Laryngology and Otology.

George Abraham Torrison, A.B., M.D.; Elmer Lawton Kenyon, A.B., M.D.; David Fiske, M.D.; Thomas Williams Lewis, S.B., M.D.; Robert Sonnenschein, M.D.; Daniel Bernard Hayden, M.D., Assistant Professors of Laryngology and Otology.

Henry H. Everett, M.D.; Edwin McGinnis, A.B., M.D.; Arthur Churchill Strong, M.D.; Linn Frederick McBride, M.D., Instructors in Laryngology and Otology.

Stanton Abeles Friedberg, Fellow, Alice Kassie Hall, M.D., Assistant in Larynology and Otology.

INTRODUCTORY

Every physician before beginning the practice of medicine should have some working knowledge of the whole field including the specialties. These courses are not designed for specialists or for preparing students to do the work of the specialist. The chief aim is to give the students an insight into the problems with which the specialist has to deal and to give them such practical training as will fit them to make the ordinary examinations of the ear, nose, and throat necessary in the general study of cases.

A total of 1.2Mjs. is required in this Department. Course 1 is prerequisite for Course 2.

COURSES OF INSTRUCTION

1. Nose, Throat, and Ear.—Introductory lecture and conference course for Juniors. Prerequisite for courses 2 and 3. M., Th., 4:00. .4Mj. Summer, Nose and Throat, Dr. McGinnis; Ear, Dr. Hall. Autumn, Nose and Throat, Assistant Professor Sonnenschein; Ear, Dr. Hall. Winter, Nose and Throat, Dr. McBride; Ear, Dr. Everett. Spring, Nose and Throat, Dr. Strong; Ear, Dr. ———. Two hours will be devoted to the defects of speech by Assistant Professor Kenyon.

2. Nose, Throat, and Ear.—Clinical and practical courses in the Dispensary in the technique of examination and in the objective study of the normal and the commoner pathological conditions of the nose, throat, and ear; also intubation of the larynx; for Juniors and Seniors. Sections limited to 10 students. Each Quarter, 2:00–4:00. 48 hours. .4Mj. Sec. *a*, M., Th.; sec. *b*, Tu., F.; sec. *c*, W., Sat.

3A. Clinical Course: Diseases of the Nose and Throat.—Prerequisite: course 1. W., 2:00-4:00. 24 hours. .2Mj. Summer, Dr. McGinnis. Autumn, Assistant Professor Lewis. Winter, Assistant Professor Torrison. Spring, Assistant Professor Sonnenschein.

3B. Clinical Course: Diseases of the Ear.—Prerequisite: course 1. M., Th., 2:00–3:00. 24 hours. .2Mj. Summer, Dr. Everett. Autumn and Winter, Professor Shambaugh. Spring, Assistant Professor Hayden.

4. Student Assistants in the Dispensary.—One student for each section, from either the Junior or Senior class, may register each Quarter for work as an assistant in the Dispensary. Sec. *a*, M., Th.; sec. *b*, Tu., F.; sec. *c*, W., Sat., 2:00–4:00. 48 hours. .4Mj.

GRADUATE COURSES

The work in this Department aims to provide adequate training for a small group of graduate students preparing for the practice of the specialty. These men serve as clinical assistants in the out-patient department for one full year; their forenoons being spent in the laboratories of the University of Chicago, in the study of the fundamental sciences. The special courses aim to assist them in the more difficult phases of the subject. These courses are also open as review courses for those already established in special practice.

5. Clinical assistants in the out-patient department. Central Free Dispensary. One year, each afternoon. Eight services, two beginning each Quarter, January, April, July, and October.

Special Courses for the graduate students serving as clinical assistants open also for practitioners of medicine.

6. Intubation.—6 hours. F., 4:00–5:00. Spring Quarter. Assistant Professor Torrison.

7. Speech Defects.—12 hours. F., 4:00–5:00. Winter Quarter. The important disorders of speech are considered from the standpoint of the anatomy and physiology of speech production including defects of articulation, stammering, the aphonias, organic and functional, the difficulties of public speakers and singers, etc. Assistant Professor Kenyon.

8. Bronchoscopy and Suspension Laryngoscopy.—12 hours. W., 4:00–5:00. Winter Quarter. Dr. McBride.

9. Functional Examination of the Ears.—12 hours. W., 4:00–5:00. Spring Quarter. Assistant Professor Sonnenschein.

10. Anatomy of the Ear, Nose, and Throat.—24 hours. M., F., 4:00–5:00. Autumn Quarter. Assistant Professor Hayden.

Courses at the University of Chicago. Open for graduate students serving as clinical assistants in the Department at Rush College:

DEPARTMENT OF ANATOMY

1. Advanced Work in the Anatomy of the Ear, Nose, and Throat.—Mornings, each Quarter.

2. Anatomy of the Nervous System.—Lectures 11:00–12:00. Autumn, Winter, and Summer. PROFESSOR HERRICK. (Course 17.)

DEPARTMENT OF PHYSIOLOGY

1. Physiology of the Nervous System and Special Senses.—Two lectures each week. Mornings. Winter Quarter, PROFESSOR CARLSON AND ASSISTANTS.

XI. DEPARTMENT OF OPHTHALMOLOGY

OFFICERS OF INSTRUCTION

WILLIAM HAMLIN WILDER, M.D., Professor and Head of the Department of Ophthalmology.

JOHN BERNARD ELLIS, M.D., Associate Professor of Ophthalmology.

CHARLES GILCHRIST DARLING, M.D.; WILLIAM GEORGE REEDER, M.D., Assistant Professors of Ophthalmology.

THOMAS DYER ALLEN, M.D., Instructor in Ophthalmology.

GEORGIANA DVORAK THEOBALD, M.D.; EARLE B. FOWLER, M.D.; HERMAN PORTER DAVIDSON, M.D., Associates in Ophthalmology.

JAMES P. FITZGERALD, M.D., Assistant in Opthalmology.

INTRODUCTORY

UNDERGRADUATE COURSES

A total of .8 major in Ophthalmology is required for graduation.

The work in this Department is arranged so that the student first gets a general survey of the subject through lecture and recitation courses.

In the same quarter, or the following one, through the courses in "practical ophthalmology" he is taught the methods of examination of the eye by various tests, the necessary manipulations for treatment, and the use of the ophthalmoscope by practical exercises on schematic and living eyes. For this work each student must provide himself with an ophthalmoscope.

All this is *preliminary* and *prerequisite* to the clinical courses, in which the student is given the privilege of examining the cases, of studying the progress of the diseases and the effect of the treatment from day to day, and also of witnessing the technique of the operations on the eye. These clinics are on the conference plan, and each exhibition of cases is followed by a discussion on the etiology, pathology, symptomatology, and treatment of the diseases under observation.

Special courses for small classes on the normal and morbid anatomy, histology, and bacteriology of the eye are made particularly instructive by the exhibition of anatomical preparations and microscopic slides.

COURSES OF INSTRUCTION

1. Diseases of the Eye.—A lecture and recitation course. 24 hours. .4Mj. Summer (Seniors), M., Th., 4:00, Dr. Allen; Autumn (Seniors), Tu., F., 4:00, Assistant Professor Reeder; Winter (Seniors), M., Th., 4:00; Spring (Juniors), M., Th., 4:00, Associate Professor Ellis.

2. Practical Ophthalmology in the Central Free Dispensary.—Limited to 8 students in each section. Each student must provide himself with an ophthalmoscope. Each Term of every Quarter. 12 hours. .2Mj. Sec. *a*, M., Th., 3:00–4:00, Autumn, Winter, and Spring, Dr. Fitzgerald; sec. *b*, Tu., F., 3:00–4:00, Summer and Spring, Dr. Davidson; sec. *b*, Autumn and Winter, Tu., F., 3:00–4:00, Dr. Allen; sec. *c*, W., S., 3:00–4:00, Autumn, Winter, and Spring, Dr. Fowler.

Courses 1 and 2 may be taken in the same quarter, but both are prerequisite to all clinical courses.

3. Clinical, Conference, and Lecture Course.—Prerequisite: courses 1 and 2. Limited to 30 students. Each Quarter, M., Th., 3:00–4:00. 24 hours. .2Mj. Summer, Assistant Professor Reeder; Autumn, Winter, and Spring, Professor Wilder.

4. Clinical Course on the Eye at the Illinois Charitable Eye and Ear Infirmary.—Prerequisite: courses 1 and 2. Limited to 10 students each. Each Quarter. F., 4:00–6:00. 24 hours. .2Mj. ———.

5. Clinical Courses at the Cook County Hospital.—In these courses special attention is given to the relation of the eye to general disease. Prerequisite: courses 1 and 2. Limited to 10 students. 24 hours. .2Mj. Summer, Winter, and Spring, M., Th., 3:00, Assistant Professor Darling.

6. Normal and Pathological Anatomy and Bacteriology of the Eye.—A course for advanced students and practitioners. Limited to 5 students. Autumn, 3 days each week. Hours to be arranged. Dr. Theobald.

6A. Special Work for Student Assistants in the Dispensary.—Junior or Senior students who have had course 1 may register as follows:

Monday, Thursday	Two students	2:00–4:00
Tuesday, Friday	Two students	2:00–4:00
Wednesday, Saturday	Two students	2:00–4:00

Each Quarter. .4Mj.

Similar opportunity is afforded at the Cook County Hospital Out-Patient Clinic from 2:00–4:00 by arrangement with Assistant Professor Darling.

This course is the equivalent of courses 2 and 3.

GRADUATE COURSE

Opportunity for graduate work is offered to a limited number of physicians desiring to fit themselves for the special practice of Ophthalmology. The work in such a course must be for a period of at least one year, and will include the study of fundamental subjects, which can be done in the forenoon, and the study of clinical subjects which can be done at the Dispensary in the afternoon, the student engaging in the practical work of the clinic under direction.

XII. DEPARTMENT OF SKIN AND VENEREAL DISEASES

OFFICERS OF INSTRUCTION

Oliver Samuel Ormsby, M.D., Professor and Head of the Department of Skin and Venereal Diseases.

Ernest Lewis McEwen, S.M., M.D., Associate Professor of Skin and Venereal Diseases.

Edward Allen Oliver, M.D., Assistant Professor of Skin and Venereal Diseases.

James Herbert Mitchell, M.D., Assistant Professor of Skin and Venereal Diseases and Chief of the Clinic for Syphilis.

Arthur Norton Mackey, M.D.; John F. Waugh, M.D., Instructors in Skin and Venereal Diseases.

Bertha Meserve Shafer, M.D.; Clark Wylie Finnerud, M.D., Associates in Skin and Venereal Diseases.

Michael Higgins Ebert, M.D., Research Fellow in Dermatology (*James Nevins Hyde* Memorial Fund).

Ethel M. McClure, Social Service Worker in the Department of Skin and Venereal Diseases.

INTRODUCTORY

The work of this Department is elective and offered to members of the Senior class. Instruction is given by clinical teaching in the College Amphitheater, the Dispensary, and the Cook County Hospital by recitations and by demonstrations to small classes of clinical, bacteriologic, and pathologic phenomena.

Instruction in this Department is supplemented by ample use of the large collection of dermatological plates, atlases, and photographs arranged in cases in proximity to the upper amphitheater; also by the use of the Baretta Models procured in Paris for use of this Department.

COURSES OF INSTRUCTION

1. Skin, Genito-urinary, and Venereal Diseases.—A recitation and conference course given to the class in sections not exceeding 25. Tu., F., 4:00–5:00. 25 hours. .4Mj. Summer, Dr. Finnerud; Autumn, Assistant Professor Mitchell; Winter, Dr. Shafer; Spring, Assistant Professor Oliver.

2. Clinical Courses.—A clinical course on the sujbect of Skin, Genito-urinary, and Venereal Diseases. The clinic has been conducted in the College for many years and is attended by a large number of out-patients of both sexes and all ages. Each Quarter throughout the year. Tu., F., 2:00–4:00. 48 hours. .4Mj. Autumn and Spring, Professor Ormsby; Summer, Assistant Professor Mitchell; Winter, Associate Professor McEwen.

3. Clinical Course in the Central Free Dispensary.—A clinical course given to the class in small sections in the dermatological and genito-urinary departments of the Central Free Dispensary. The students is here brought in personal contact with patients and required to examine and prescribe for them as in private practice. Limited to 10 students in each section. Each term throughout the year, daily, 2:00–4:00. 24 hours. .2Mj. Sec. *a*, M., Th., Dr. Waugh; sec. *c*, W., Sat., Autumn, Spring, Associate Professor McEwen; Summer, Winter, Dr. Finnerud.

4. Student Assistant in the Dispensary.—Provision is made for three students to assist in the Dispensary each Quarter, one M. and Th., one Tu. and F., and one W. and Sat. 48 hours. .4Mj.

4A. Course in Syphilis.—Work as student assistant in the Evening Clinic in the Central Free Dispensary. Opportunity is afforded for special training in the methods of diagnosis and treatment of syphilis. Prerequisite: course 1. Limited to 2 students. Each Quarter, Tu., F., 7:00–9:00. .4Mj. Assistant Professor Oliver.

5. Syphilis.—A clinical and lecture course comprising a general survey of the subject of syphilis. Fri., 4:00. 12 hours. .2Mj. Autumn, Winter, and Spring, Associate Professor McEwen.

5A. Cook County Hospital Clinics.—A clinic and conference course at the Cook County Hospital on diseases of the skin and syphilis. M., 4:00–6:00. .2Mj. Autumn, Winter, and Spring, Assistant Professor Oliver.

7. Serology and Therapeutics of Syphilis.—A laboratory course in the technique of the Wassermann test of the blood and spinal fluid and in the intravenous and intramuscular injections of arsenical and mercuiral preparations. Limited to 6 students. First Term, 8:00–10:00, twice weekly; Second Term, 2:00–4:00, twice weekly. .2Mj. Days to be arranged. Autumn, Winter, and Spring, Assistant Professor Mitchell.

GRADUATE COURSE IN DERMATOLOGY AND SYPHILIS

A limited number of graduates will be accepted for work in Dermatology and Syphilis. For the present the course may be for either one or two years. Applicants must be approved by a department committee. For particulars apply to Professor Oliver S. Ormsby.

XIII. GENERAL LECTURES AND OPTIONAL COURSES

1. Medical Jurisprudence.—A lecture course supplemented by recitations and conferences. Tu., W., and S., 8:00–9:00, First Term. .3Mj. Winter. Associate Professor Ralph Webster.

2. The History of Medicine (optional).—A lecture course by Professor Dodson. Hours to be announced. .1Mj. Winter.

3. Examinations for Life Insurance (optional).—A lecture and conference course on the nature and purpose of life insurance, the duties and essential qualifications of the examiner for life insurance, etc. 12 hours. Hours to be announced. .2Mj. Winter, Professor Dodson and Associate Professor Linnell.

4. Medical Economics (optional).—A lecture course in medical economics and ethics. 6 hours. Hours to be announced. .1Mj. Winter.

5. General Review of the Clinical Branches.—A conference and recitation course affording Senior students an opportunity to review the clinical branches and to co-ordinate their knowledge in preparation for examinations for license or for hospital interneships and for practice of medicine. In sections limited to 30 students each. 8 hours per week for each section. Summer, sec. *a*, M., W., Th., 4:00–6:00; sec. *b*, Tu., Th., and F., 4:00–6:00; sec. *c*, M., W., Th., 7:00–9:00 P.M. 1Mj.

5A. A continuation of course XIII-5. Autumn. .1Mj.

5B. A continuation of course XIII-5A. Winter. First Term. .5Mj.

8. Military Medicine.—A course in medicine, hygiene, sanitation, administration, and surgery as related to the medical departments of the army, navy, and marine corps. Th., 1:00–2:00. .2Mj.

Courses for first, second, third, and fourth years are arranged in accordance with the program authorized by the Surgeon-General.

9. Medical History and Medical Writing.—A lecture course on the evolution of modern medicine and on the art of medical writing. 12 hours. 2Mj. Tu. 5:00–6:00. Autumn Quarter. Dr. Morris Fishbein.

LABORATORIES, EQUIPMENT, AND LIBRARIES AT THE UNIVERSITY OF CHICAGO

THE HULL BIOLOGICAL LABORATORIES

On December 14, 1895, Miss Helen Culver, of the city of Chicago, presented to the University of Chicago property valued at $1,000,000—the whole gift, according to the terms of the letter of endowment, to be devoted to the increase and spread of knowledge within the field of the biological sciences. From this fund there have been erected, at the north end of the University grounds, four buildings to serve as laboratories for the Anatomical, Botanical, Physiological, and Zoölogical Sciences. Medical instruction is given in the Anatomical, Physiological, and Zoölogical Laboratories.

THE ANATOMICAL LABORATORY

The Anatomical Laboratory is 120 by 50 feet and four stories high, exclusive of basement and attic. It was constructed to provide for instruction and research in Anatomy, including Neurology, Gross Anatomy, and Microscopic Anatomy. The first floor is occupied by a lecture room, a chart room, two laboratories for research and instruction in Immunology, a photographic room, and two small research laboratories for members of the staff. The official bulletin of the Dean of Medical Students is on this floor. The second floor contains research laboratories in Neurology, and three laboratories for microscopic work. The third floor contains a large laboratory for human dissection, two laboratories for advanced work in microscopic anatomy, and four rooms for members of the staff. The fourth floor contains a second large dissection laboratory, two small laboratories for research, a museum of anatomical preparations and models, and several small rooms for the staff. The laboratories are well equipped for teaching and research in all branches of anatomy and in immunology.

THE PHYSIOLOGICAL LABORATORY

The Physiological Laboratory is 102 by 52 feet and four stories high, exclusive of the basement and attic. The basement contains a dark room, two laboratories for advanced courses in physiology, combustion and centrifugal room, two storerooms, and the mechanic's shop. It is connected with the greenhouse, which has been converted into an aquarium and animal room. The first floor contains general laboratories for college and medical courses in physiology, a lecture-room, a storeroom, and a small research laboratory. The second floor contains a large lecture-room, an optical room, and four research laboratories. The third floor contains two large laboratories and one small laboratory for research in Physiology, one large laboratory and two small ones for research in Physiological Chemistry and Pharmacology, and a balance-room. The fourth floor contains two rooms with animal cages and two operating rooms, a storeroom, a large laboratory for work in Physiological Chemistry, and a laboratory for work in Physiology and Pharmacology. The attic contains animal rooms. Additional animal quarters are provided in a building at Fifty-seventh Street and Ingleside Avenue. The laboratories are well equipped both for general instruction in Physiology, Physiological Chemistry, and Pharmacology, and for advanced and research work in these sciences.

THE ZOÖLOGICAL LABORATORY

The Zoölogical Laboratory is 120 by 50 feet and four stories high, exclusive of the basement. On the first floor are located the library of the biological departments, a synoptical museum, a large laboratory for elementary Zoölogy, and a lecture-room. The second floor contains one large laboratory for beginners in research and a number of smaller laboratories for more advanced work. The third floor contains three large laboratories for Embryology and a number of rooms for research. The fourth floor contains a large laboratory for Comparative Anatomy, two large research laboratories and several smaller ones. The basement contains an animal research laboratory, operating rooms, and chemical storerooms. The best optical and other apparatus demanded by zoölogical work is provided. There are series of models and charts illustrating embryological and morphological subjects and ample facilities for keeping land and aquatic animals under favorable conditions for study.

THE HOWARD TAYLOR RICKETTS LABORATORY

The Ricketts Laboratory was built with funds provided from the general income of the University and was opened January 1, 1915, to provide temporary quarters for the Department of Pathology and the Department of Hygiene and Bacteriology. It is a one-story brick building, measuring 180 by 180 feet, located on the west side of Ellis Avenue between Fifty-seventh and Fifty-eighth streets. The south half is occupied by the Department of Pathology, the north half by Hygiene and Bacteriology. A central wing provides a lecture-room, and two lateral wings contain animal houses, one for each department. A fireproof building in the court provides for the Museum of Pathology. In addition to general laboratories, research-rooms, preparation rooms, and offices, each department has an equipped chemical laboratory, and there is one room equipped for experimental surgical work.

RICKETTS LABORATORY SOUTH

Ricketts Laboratory South was built in the winter of 1923 with funds from the general income of the University, and was opened on March 1, 1923, to provide additional quarters for the Department of Hygiene and Bacteriology. It is a one-story brick building fronting 110 feet on Ellis Avenue, just north of the Press Building. The building contains one general laboratory, one classroom, a chemical laboratory, two laboratories for members of the staff, three research laboratories, a sterilizer room, and an animal room. It is fully equipped for teaching and research work.

THE KENT CHEMICAL LABORATORY

The Chemical Laboratory was provided by the generosity of Mr. Sidney A. Kent, is 176 by 64 feet, and is three stories high, exclusive of the basement. An amphitheater seating 750 people forms an annex to the building. Lectures are given in rooms on the first floor. The laboratory instruction in General Inorganic and Elementary Organic Chemistry is given on the third floor in three large laboratories accommodating 300 students. Each student is given a separate desk supplied with gas and water and is furnished with all the necessary chemicals and apparatus. The laboratories of Analytical Chemistry are on the second and third floors. The advanced work in Chemistry is done in general and private

laboratories on the first and second floors. There are a number of small rooms used as balance, combustion, gas-analysis, photographic rooms, etc. The Chemical Library contains full sets of the most important journals, books of reference, and other works relating to Chemistry.

THE LIBRARIES

The University Libraries contain at the present time over 650,000 volumes bound and catalogued. Considering that a large number of volumes are bound together, and that there are in the Libraries over 200,000 pamphlets and a considerable number of volumes not as yet accessioned, the total number will probably exceed one million.

Of the fourteen libraries on the campus, the General Library, located in the Harper Memorial Building, is the largest, containing about 400,000 volumes. The Departmental Libraries of particular interest to medical students are: Biology, including Zoölogy, Anatomy, Physiology, Physiological Chemistry and Pharmacology, Botany, Pathology, Hygiene and Bacteriology, numbering over 35,000 volumes; Chemistry and Physics with about 7,000 volumes each.

The General Library has a dictionary catalogue, author, subject, and title in one alphabet, also a classed or systematic catalogue. These two catalogues include not only books in the General Library, but also most of the books in Departmental Libraries. The Departmental Libraries have usually only author catalogues, and in part shelf lists or classed catalogues, covering their own collections.

Students who have matriculated and paid their library fee, may take at one time three volumes from the General Library. These may be kept two weeks, and at the end of that time, if desired, may be renewed for two weeks. Former students may continue the use of the Library on recommendation of a Dean or Head of a Department of Instruction of the University, indorsed by the Director of the Libraries, without fee, or he may secure the same privilege by the payment of a library fee of $2.50 a quarter.

The General Library and the Biology Library are open on every week day from 8:00 A.M. to 10:00 P.M. The Library receives about 3,000 current periodical publications, including the transactions and proceedings of learned societies.

The students of the University are admitted to the John Crerar Library and the Newberry Library. The former contains a large number of medical and general scientific works.

The Public Library of Chicago, with its various branches, is also avaiable to medical students for general reading.

BUILDINGS, EQUIPMENT, AND HOSPITAL FACILITIES AT RUSH MEDICAL COLLEGE

The Clinical Building, located at West Harrison and Wood streets, is 60 by 80 feet and four stories in height. The first floor is occupied by the college library and reading-room. On the second floor are situated the offices of the College, the lower amphitheater, seating 400, and clinical waiting-rooms. The

third floor contains the upper amphitheater, seating 530 persons, a large surgical examining and dressing room, five clinical examining rooms, and a waiting-room for patients. The fourth floor is occupied in part by the upper amphitheater and in part by the laboratory for surgical and orthopedic appliances and bandaging.

The Library and Reading-Room occupies the first floor of the Clinical Building, a most convenient location for students. The library contains 24,475 volumes, 4,780 pamphlets, 14,859 reprints, and files of all the leading medical journals in English, German, and French. During the last college year the library had a daily average attendance of 197 students.

Senn Hall, erected through the munificence of the late Professor Senn and other members of the Faculty, adjoins the Clinical Building on the east. It covers a ground space of 40 by 90 feet, is eight stories in height (including the basement), and of absolutely fireproof construction. The basement and first three floors, affording over 10,000 square feet of floor space, are devoted to the dispensary and the clinical teaching connected therewith. The fourth and fifth floors are occupied by clinical laboratories and recitation rooms. The remaining two stories contain two surgical and medical amphitheaters, seating about 140 each, with necessary waiting and preparation rooms.

The Laboratory Building, on the south side of Harrison Street, is 100 by 45 feet in area and six stories in height (including basement). The basement is occupied by storage-rooms for apparatus, an animal room for the laboratory of Pathology and Bacteriology, and a cloakroom for students. Adjoining the basement is a separate building for the preparation and storage of cadavers with a capacity for about two hundred bodies. The first and second stories are devoted to the Department of Pathology and Bacteriology, which is fully equipped with the necessary microscopes and other apparatus for advanced work in these branches. The third floor is occupied by the Department of Chemistry and Toxicology and is supplied with all the necessary apparatus and materials for advanced work in these branches in their relation to practical medicine. The fourth floor contains four recitation rooms and a laboratory for Therapeutics. The fifth floor is devoted to advanced work in practical Gross Anatomy and to Operative Surgery.

The Presbyterian Hospital, with accommodations for about 420 patients, adjoins the College and is connected with it, so that patients may be transferred directly from the wards to the clinical amphitheaters. In this hospital over 5,000 patients are treated annually, and it thus affords a large amount of valuable material for the clinics.

ATTENDING STAFF OF THE PRESBYTERIAN HOSPITAL

MEDICINE

Consulting Physicians: Drs. Frank Billings, James B. Herrick, John A. Robison, John M. Dodson.

Attending Physicians: Drs. Bertram W. Sippy, Wilber E. Post, Rollin T. Woodyatt, Ernest E. Irons, Ralph C. Brown. *Associate Attending Physicians:* Drs. Theodore Tieken, James Murray Washburn, Asher F. Sippy, Samuel R. Slaymaker, B. M. Linnell. *Assistant Attending Physicians:*

Drs. James R. Greer, John H. McClellan, George F. Dick, Fred M. Smith, William A. Thomas, Donald P. Abbott, George H. Coleman, Lee C. Gatewood, Charles Leland Shafer, Robert C. Keeton.

DISEASES OF CHILDREN

Attending Physician: Dr. Clifford G. Grulee. *Associate Attending Physician:* Dr. Walter F. Winholt. *Assistant Attending Physicians:* Dr. Charles M. Bacon.

PSYCHIATRY AND NEUROLOGY

Attending Physicians: Drs. Thor Rothstein, Peter Bassoe. *Assistant Associate Physicians:* Drs. James C. Gill, George W. Hall.

SURGERY

Consulting Surgeons: Drs. David W. Graham, William T. Belfield.

Attending Surgeons: Drs. Arthur Dean Bevan, Dean D. Lewis. *Associate Attending Surgeons:* Drs. Carl B. Davis, D. B. Phemister, Charles A. Parker (Orthopedic Surgery), Vernon C. David, Kellogg Speed. *Assistant Attending Surgeons:* Drs. Edwin M. Miller, Albert H. Montgomery, Golder L. McWhorter, Gatewood, McMicken Hanchett, Hillier L. Barker. *Associate Attending Urologists:* Drs. Herman L. Kretschmer, Robert H. Herbst. *Associate Attending Oral Surgeon:* Dr. Frederick B. Moorehead. *Anesthetist:* Dr. Isabella Herb. *Assistant Anesthetist:* Dr. Mary Lyons.

Resident Surgeons: Drs. Francis H. Straus, William John Gallagher.

OBSTETRICS AND GYNECOLOGY

Consulting Obstetrician and Gynecologist: Dr. John Clarence Webster.

Attending Obstetrician and Gynecologist: Dr. Noble S. Heaney.

Associate Attending Obstetrician and Gynecologist: Dr. Carey Culbertson.

Assistant Attending Obstetricians and Gynecologists: William F. Hewitt, Kathleen Harrington, Aaron E. Kanter, Aldo K. Germann.

Out-Patient Department: Dr. Frederick William Rohr.

LARYNGOLOGY AND OTOLOGY

Attending Laryngologist and Otologist: Dr. George E. Shambaugh. *Assistant Attending Laryngologists and Otologists:* Drs. George A. Torrison, Thomas W. Lewis, Daniel B. Hayden, and Edwin A. McGinnis.

OPHTHALMOLOGY

Attending Ophthalmologist: Dr. William H. Wilder. *Assistant Attending Ophthalmologists:* Drs. John B. Ellis, Charles G. Darling, Wm. G. Reeder, Thomas F. Allen, Earle B. Fowler.

DERMATOLOGY

Attending Dermatologist: Dr. Oliver S. Ormsby. *Assistant Attending Dermatologists:* Drs. Ernest L. McEwen, J. Frank Waugh, James Herbert Mitchell.

PATHOLOGY

Attending Pathologists: Drs. Ludvig Hektoen, Edwin R. LeCount.
Resident Pathologist: Harry Alvin Oberhelman.

CHEMISTRY

Attending Chemist: Dr. Ralph W. Webster.

X-RAY DEPARTMENT

Attending Roentgenologist: Dr. Cassie Bell Rose.

The Home for Destitute Crippled Children, situated about a half-mile from the College, has about 100 beds and an out-patient department. Under the contract recently entered into between the directors of the Home and the trustees of Rush Medical College this clinical material is made available to the Faculty and students of the College for instruction and research. It affords excellent opportunities in Orthopedic Surgery.

STAFF OF THE HOME FOR DESTITUTE CRIPPLED CHILDREN

CONSULTING STAFF

Dr. James B. Herrick, Department of Medicine.
Dr. Arthur Dean Bevan, Department of Surgery.
Dr. John M. Dodson, Department of Pediatrics.
Dr. Thor Rothstein, Department of Neurology.
Dr. George E. Shambaugh, Department of Laryngology and Otology.
Dr. William H. Wilder, Department of Ophthalmology.
Dr. Ludvig Hektoen, Department of Pathology.
Dr. Oliver S. Ormsby, Department of Dermatology.

ATTENDING STAFF

Dr. Charles A. Parker, Orthopedic Surgeon.
Dr. S. R. Slaymaker, Department of Medicine.
Dr. Clifford G. Grulee, Department of Pediatrics.
Dr. Peter Bassoe, Department of Neurology.
Dr. John B. Ellis, Department of Ophthalmology.
Dr. J. E. Rhodes, Department of Nose and Throat.
Dr. E. L. McEwen, Department of Dermatology.
Drs. Dean D. Lewis and Carl B. Davis, Department of General Surgery.
Mr. Charles O. Carlstrom, Department of Kinesitherapy.
Dr. Frederick B. Moorehead, Department of Oral Surgery.

ASSOCIATE ATTENDING STAFF

Drs. Jacob Myer and Elvin J. Berkheiser, Department of Orthopedic Surgery.
Dr. ———, Department of Medicine.
Dr. ———, Department of Pediatrics.
Dr. ———, Department of General Surgery.
Dr. Edwin McGinnis, Department of Nose and Throat.
Dr. James J. Blayney, Department of Dentistry.

STAFF OF THE DURAND HOSPITAL OF THE JOHN McCORMICK INSTITUTE FOR INFECTIOUS DISEASES

The John McCormick Institute for Infectious Diseases with the Durand Hospital is situated a block south of the College. The hospital has about 50 beds for acute infectious diseases, and the students of the College, in small groups, visit the patients as part of the required work.

Director: Dr. Ludvig Hektoen.

Physician: Dr. George G. Weaver.

Consulting Physicians: Drs. E. E. Irons and George F. Dick.

Consulting Surgeon: Dr. D. B. Phemister.

Consulting Otolaryngologists: Drs. R. Sonnenschein and L. F. McBride.

In the **Cook County Hospital,** which is situated opposite the College, are treated about 20,000 patients annually. In this institution are given about forty clinics a week, including all varieties of medical and surgical cases. The facilities for the study of Pathology which are offered at the Cook County Hospital are unexcelled in this country. Between 300 and 400 postmortems are made annually in the necropsy theater by Professor LeCount, Professor Wells, and the other pathologists of the hospital.

Clinical courses in the Cook County Hospital are offered to the students of Rush Medical College by the following members of the Faculty:

Attending Physicians: Drs. Jos. L. Miller, Jos. A. Capps, Theodore Tieken, Ludwig M. Loeb, Ernest E. Irons, Ellis K. Kerr, Archibald Hoyne, Karl K. Koessler, George H. Coleman, Lee Connell Gatewood, Arthur Byfield.

Attending Neurologists: Drs. Sydney Kuh, John Favill.

Attending Pediatrists: Drs. August Strauch, Walter Winholt.

Attending Surgeons: Drs. Charles A. Parker (Orthopedic), Vernon C. David, George G. Davis, Paul Oliver, Kellogg Speed, Daniel N. Eisendrath, Roger T. Vaughan, David C. Strauss, Hugh McKenna, and Edward J. Lewis.

Attending Obstetricians: Dr. W. George Lee

Attending Gynecologist: Dr. Carey Culbertson.

Attending Ophthalmologist: Dr. Charles G. Darling.

Attending Dermatologist: Dr. Edwin A. Oliver.

Attending Pathologists: Drs. E. R. LeCount, H. G. Wells.

In 1915 the Country Home for Convalescent Children, at Prince Crossing, Illinois, a few miles west of Chicago, entered into affiliation with Rush Medical College. It has for its purpose the care, cure, and education of helpless and crippled children.

ATTENDING STAFF OF THE COUNTRY HOME FOR CONVALESCENT CHILDREN

Orthopedic Surgeons: Drs. Charles A. Parker and Elvin J. Berkheiser.

Consulting Surgeon: Dr. Arthur Dean Bevan.

Consulting Physician: Dr. James B. Herrick.

Laryngologist and Otologist: Dr. Daniel B. Hayden.
Oculist: Dr. Wm. G. Reeder.
Oral Surgeon: Dr. Frederick B. Moorehead.

In 1915 St. Joseph's Hospital, 2100 Burling Street, entered into affiliation with Rush Medical College. This hospital, conducted by the Sisters of Charity, St. Vincent de Paul, has 210 beds.

STAFF OF THE CHILDREN'S MEMORIAL HOSPITAL
(in affiliation with the University of Chicago)

Consulting Staff

Medical Department: Dr. Samuel J. Walker.
Surgical Department: Dr. Herman C. Kertschmer (Urology).

Medical Department

Attending Physician and Chief of Staff: Dr. Joseph Brennemann.
Associate Attending Physicians: Dr. George E. Baxter, Dr. Archibald Hoyne (Contagious Diseases).
Assistant Attending Physicians: Drs. C. A. Aldrich, Harold A. Bachmann, Franklin J. Corper, Stanley Gibson, Sigurd Kraft, Gustav Kaufman, James J. McCarty, Wm. B. McClure, Charles Schott, Harold A. Rosenbaum.
Clinical Assistants in Medicine: Dr. Katherine Mayer, A. H. Roler, A. J. Weigen, John P. Coughlin, John F. Carey.

NEUROLOGY

Attending Neurologist: Dr. Ralph Hamill.

DERMATOLOGY

Attending Dermatologist: Dr. E. A. Oliver.
Assistant Attending Dermatologist: Dr. Clark W. Finnerud.

Surgical Department

Attending Surgeon: Dr. Albert H. Montgomery.
Assistant Attending Surgeons: Drs. J. A. Graham, M. W. Hanchett, Edwin M. Miller, Frederick B. Moorehead (Oral Surgeon).
Clinical Assistants in Surgery: Drs. E. C. McGill, W. C. Burket, Jay Ireland.

ORTHOPEDICS

Attending Orthopedic Surgeon: Dr. Edwin W. Ryerson.
Associate Attending Orthopedic Surgeon: Dr. Robert O. Ritter.
Assistant Attending Orthopedic Surgeons: Drs. E. J. Berkheiser, Dwight F. Clark, Edson B. Fowler, J. R. Harry.

OPHTHALMOLOGY

Attending Ophthalmologist: Dr. Alfred M. Hall.

OTOLARYNGOLOGY

Attending Otolaryngologist: Dr. David Fiske.

Associate Attending Otolaryngologists: Drs. Edwin McGinnis, John C. Williams.

Assistant Attending Otolaryngologists: Drs. T. C. Galloway, Myron Kahn.

ROENTGENOLOGY

Attending Roentgenologist: Dr. C. Johnston Davis.

PATHOLOGY

Attending Pathologist: Dr. William G. Hibbs.

RESIDENT STAFF

Senior Resident Physician: Dr. Samuel C. Henn.

Junior Resident Physician: Dr. Arthur Swartz.

Extra-mural courses.—Through the courtesy of the medical attendants and managing officers of several hospitals and dispensaries within convenient distance of the College extra-mural clinical courses are offered to the students of Rush, in small groups, and the clinical material available for teaching has thus been greatly augmented. Such courses are offered at the West Side Hebrew Dispensary, treating over 30,000 cases annually; at St. Luke's Hospital, with about 2,000 cases annually; at the Illinois Charitable Eye and Ear Infirmary, treating about 1,000 cases; at the Chicago Isolation Hospital; and at St. Anthony's Hospital, with about 100 beds.

FELLOWSHIPS, HOSPITAL INTERNES, AND PRIZES

(*At Rush Medical College*)

FELLOWSHIPS

The following fellowships have been provided in the several departments:

1. The Fellowship in Chemistry. Not to be awarded for 1923–24.

2. The Fellowship in Pathology. Awarded to Dr. Celestin B. Semerak.

3. The "Dane Billings Memorial Fellowship in Medicine," founded by Professor Frank Billings. Awarded to Dr. William George Hibbs.

4. The "Daniel R. Brower Fellowship," founded by the late Professor Daniel Roberts Brower, in the Department of Medicine. Not awarded for 1923–24.

5. The "Nicholas Senn Fellowship in Surgery," founded by the late Professor Nicholas Senn. Awarded to Dr. Francis H. Straus.

6. The "A. D. Thompson-Bevan Fellowship in Surgery and House Surgeonship in the Presbyterian Hospital," established in 1915 through the generosity of Mr. A. D. Thompson, Duluth, Minn., and Professor Arthur Dean Bevan. Awarded to ———.

7. The "Frances A. Hardy Fellowship in Surgery and Assistant House Surgeonship in the Presbyterian Hospital," maintained by Mr. Francis A. Hardy. Awarded to Dr. William John Gallagher.

8. The "Stanton Abeles Friedberg Fellowship in Laryngology and Otology," established in 1921 as a memorial to her husband by Mrs. Stanton A. Friedberg, is awarded each year to a graduate student in the Department of Laryngology and Otology. Awarded in 1923 to Dr. Alice Kassie Hall.

SCHOLARSHIPS

9. The "E. Fletcher Ingals, Jr., Scholarship in Laryngology and Otology," yielding $250 annually, is awarded to a physician who is seeking to qualify himself for the practice of laryngology and otology. Opportunity is afforded the holder of this scholarship for advanced work and clinical training. Not awarded in 1922–23.

10. The "La Verne Noyes Scholarships," ten in number, are granted each year to students in the clinical years who served in the world-war. The conditions under which they are granted are the same as those pertaining to the La Verne Noyes Scholarships at the University.

HOSPITAL INTERNES

Positions as internes, through a competitive examination held by the respective hospital staffs, are open each spring to graduates of Rush Medical College in the following Chicago hospitals: Presbyterian, Children's Memorial, Home for Destitute Crippled Children, Cook County, Michael Reese, St. Joseph's, St. Luke's, Augustana, Alexian Brothers', Passavant, Chicago Policlinic, Norwegian-American, Illinois Charitable Eye and Ear Infirmary, St. Anthony's, Swedish, Chicago Lying-in, and others, and in a much larger list of institutions outside of the city of Chicago which make appointments from the students of the Senior class in Rush Medical College. The occupants of these positions receive their board and lodging and acquire experience in every department of practical Medicine and Surgery.

PRIZES

The Benjamin Rush Prize.—A medal and the sum of $50 is given by the Faculty at each commencement to that member of the graduating class who passes the highest examination in every department of Medicine represented that year in the examination for the degree. Awarded in 1923 to Lyle Glenn Craig, S.B.

The Daniel Brainard Prize.—A medal is annually given by the Faculty to the student who makes and presents to the College Museum the best accepted dissection in Surgical Anatomy. Awarded in 1923 to Mr. Alexander Eichel Brunschwig.

The Freer Prizes.—These prizes are derived from the income of a fund presented to the College by the late Nathan M. Freer, of the Board of Trustees, as a memorial to the names of two honored members of his family long identified with the highest interests of this institution.

*The J. W. Freer Medal and the sum of $50 are awarded as a first prize to that member of the Junior or Senior class who presents the best dissertation involving original investigation on the part of the student. A second prize of $25 is awarded to the next successful competitor. The dissertations must be submitted to the Dean of Students on or before April 1, 1924.

First prize awarded in 1923 to Ethel Cooper, S.B.

Second prize awarded in 1923 to Benjamin Goldberg, S.B.

*The L. C. Freer Medal and the sum of $50 are offered as a first prize to that member of the Freshman or Sophomore class who presents the best dissertation involving original investigation on the part of the student. A second prize of $25 will be awarded to the next most successful of the competitors. *This prize will be competed for by students in the medical courses of the University.* The dissertation must be placed in the hands of the Dean of Students by April 1, 1924.

First prize awarded in 1923 to James Lincoln McCartney, S.B.

Second prize—not awarded.

The De Laskie Miller Prize given by his daughter, Mrs. C. C. Curtiss, for the best work in the department of Obstetrics and Gynecology, was awarded to Waldo Neil Graves, A.B.

The Henry M. Lyman Prize.—In memory of Henry M. Lyman, who for many years devoted much of his best energies and his unusual ability to the upbuilding of Rush Medical College, and who served successfully as Professor of Physiology and Neurology and Professor of Medicine, and who was later Dean of the Faculty, a fund has been created by his children, the proceeds of which, amounting to $25 a year, will be offered as a prize to the member of the Junior or Senior class who shall present the best dissertation on a topic connected with internal medicine. This dissertation must include the results of original laboratory or ward work or of personal clinical observation. Before the work is undertaken by the student the Head of the Department of Medicine should be consulted as to the choice of subject and other details.

Awarded to Jay Bailey Carter, S.B.

The Howard T. Ricketts Prize.—In memory of Dr. Howard Taylor Ricketts, at one time a member of the Department of Dermatology, who died of typhus fever, while investigating that disease, in the City of Mexico, May 3, 1910, this Department has established a prize in Dermatology. This prize, of the value of $25, will be awarded annually to the student presenting the best dissertation embodying the results of original investigation on some topic related to Dermatology.

Not awarded in 1923.

Medical scholarships as prizes for research.—The Trustees of the College have established three scholarships in the Junior and Senior years as prizes for the best dissertations involving original work in any of the branches usually included in the first two years of the medical curriculum: anatomy, both gross and

* *Rules governing the award of the Freer medals.*—(1) The candidate must present his dissertation in typewritten form. (2) Each candidate may present but one dissertation. (3) As the purpose of the medals is to stimulate research, only those dissertations will be considered that have been written in competition for the medal. This will exclude those published previous to their presentation to the committee and those that were written for a degree. (4) Applicable to the J. W. Freer Medal only. Only those dissertations that are submitted by bona fide Juniors and Seniors will be considered. Students acting as assistants to instructors and receiving compensation therefor cannot compete for the prize.

microscopic, embryology, neurology, physiology, physiological chemistry, pharmacology, bacteriology, or pathology. This competition is open to students completing the second year of the medical course in university medical schools whose standards are equal to those of Rush Medical College. The first prize scholarship is the tuition for three quarters in Rush Medical College ($240), the second prize tuition for two quarters ($160), and the third prize tuition for one quarter ($80). Dissertations must be sent to the Dean of Medical Students, Rush Medical College, on or before April 1, 1924.

AT THE UNIVERSITY OF CHICAGO

FELLOWSHIPS

Fellowships are awarded annually by the Trustees, upon the recommendation of the President and the nomination of particular departments, to graduate students who desire to pursue advanced work in some special line.

Applications for Fellowships.—Applications for Fellowships should be addressed to the Dean of the Graduate School in which the Fellowship is sought, *and should be in his hands on or before March 1.*

Appointments to Fellowships.—

a) Date.—The annual assignment of Fellowships is made April 1. A Fellowship is available for any three of the four quarters, beginning with the Summer Quarter, following the date of appointment.

b) Attainments required.—The candidate must have attained proficiency in some department. In general, he should have spent at least one year in resident study after receiving his Bachelor's degree. In making the appointment special weight is given to dissertations indicating the candidate's ability to conduct original investigation.

Quarterly Reports.—Each Fellow makes a written report to the Dean at the beginning of each quarter. This report outlines his work as a student, and the work assigned to him as an officer of the University for the current quarter, and is indorsed by the head of the department. The report blanks may be procured at the office of the Dean.

A. UNIVERSITY FELLOWSHIPS

Appropriations are made annually from the general funds of the University for the maintenance of Fellowships in the Graduate Schools of Arts, Literature, and Science. These Fellowships at present range in value from $180, the tuition fees of a graduate student for three quarters, to an amount $400 in excess of those fees. It is hoped at an early date to increase this amount.

The University asks of each of these Fellows a modicum of service, consisting of work (*a*) as an instructor; (*b*) as an assistant in reading examination papers; (*c*) as an assistant on a University journal; or (*d*) as an assistant in one of the departmental laboratories, museums, or libraries. In no case is a Fellow expected to devote so much time to the work here indicated as to interfere seriously with his own study. Fellows will not engage in outside work for compensation, unless by permission of the President.

B. ENDOWED AND ANNUAL FELLOWSHIPS

In addition to the regular University Fellowships mentioned, there are special Fellowships offered by individuals. These vary somewhat in number and amount from year to year. At present they are as follows:

1. *The Joseph B. Loewenthal Fellowship in Chemistry,* endowed by Mr. Berthold Loewenthal, of Chicago, as a memorial to his son, Joseph B. Loewenthal. It yields $400 to the incumbent annually appointed, and is awarded on the nomination of the Department of Chemistry and the recommendation of the President of the University.

2. *The Gustavus F. Swift Fellowship in Chemistry,* endowed by Mrs. Gustavus F. Swift, Chicago, as a memorial of her husband, Gustavus F. Swift. It yields about $920 to the incumbent annually appointed, and is awarded for especial ability in research on the nomination of the Department of Chemistry and the recommendation of the President of the University.

3. *The Edith Barnard Memorial Fellowship in Chemistry,* established in memory of Dr. Edith Barnard, yields $150 a year, and is awarded by the University, on nomination of the Department of Chemistry, to some deserving graduate student.

4. *The Daniel L. Shorey Traveling Fellowship in Greek,* endowed by Mrs. Charles Hitchcock, of Chicago. It yields $1,200 to the incumbent annually appointed, and is awarded on the nomination of the head of the Department of Greek, subject to the approval of the Board of Trustees.

C. RESEARCH FELLOWSHIPS

1. *The National Research Council Fellowships in Physics and Chemistry,* provided by the Rockefeller Foundation, are awarded by the National Research Council. Fellows may choose the institution in which they desire to pursue research. Applications should be made to the National Research Council, Washington, D.C.

2. *The Mr. and Mrs. Frank G. Logan Research Fellowships,* endowed by Mr. Frank G. Logan, are available for research in Medicine, Surgery, and Bacteriology and Pathology. Each Fellowship affords an annual stipend of $1,000. On the organization of the Medical School the Research Fellowships in Medicine and in Surgery will be awarded. The Fellowship in Bacteriology and in Pathology is awarded in alternate years.

3. *The Gypsum Fellowships,* provided by the Gypsum Industries Association, are available for two graduate students for research in soil fertilizers in the Department of Botany. Each fellowship affords an annual stipend of $750 payable in twelve payments.

4. *The Du Pont Fellowship,* granted by the E. I. du Pont de Nemours Company, is available for the encouragement of research in any field of Chemistry. It yields $750 annually.

D. ADDITIONAL PROFESSIONAL SCHOOL FELLOWSHIPS

For information see the *Circular of Information* of the schools concerned.

SCHOLARSHIPS, PRIZES, AND OTHER AIDS AND AWARDS

A. SCHOLARSHIPS

I. HONOR SCHOLARSHIPS

Honor Entrance Scholarships.—To a limited number of students of high rank from co-operating high schools honor scholarships ($225 in tuition fees) are granted each year. Holders of honor scholarships are not required to render service to the University. These scholarships may be revoked at the end of any quarter if the holder's work is not maintained at a satisfactory grade.

Competitive Examination Entrance Scholarships.—In connection with the annual conference of the University in co-operation with its secondary schools, held at the University in May of each year, competitive examinations in certain subjects are open to Seniors in the co-operating high schools. There are likewise contests in reading aloud and effective speaking. Eleven scholarships are awarded annually, each covering tuition ($225) for the next academic year.

Second-Year Honor Scholarships.—To twenty Junior College students who have shown exceptional ability in the work of the first year honor scholarships are granted for the second year (three quarters) for the undergraduate course. One of these is called *The Lillian Gertrude Selz Scholarship* and grants full annual tuition fees plus $25 in cash to the young woman who completes the first year with highest standing.

Senior College Honor Scholarships.—Subject to the approval of the Committee on Scholarships, honor scholarships in the Senior Colleges, covering the tuition fees for the next academic year, are awarded to students nominated by the department for excellent work (1) in the Junior College courses, and (2) in the first three years of the College course.

Graduate Honor Scholarships.—Scholarships are assigned to students who have completed with honor the work of the Senior College. Each department of the University, with the approval of the Committee on Scholarships, has the privilege of naming a student who is for that year the honor student of the Senior College in that department, and to this student there is given a scholarship yielding in each case a sum equal to the University tuition fees for three quarters, provided the student continues his studies in the Graduate Schools. The assignments are made in the Spring Quarter, and in no case does a scholarship continue beyond the end of the Spring Quarter next following the date of assignment.

II. ENDOWED SCHOLARSHIPS

The Enos M. Barton Scholarship, endowed by Mr. Enos M. Barton, Chicago, provides for the full tuition fees of a student. It is awarded annually to an undergraduate student whose scholarship in preparatory work and in college shall reach B, and who shall maintain this standing subject to forfeiture.

The Permelia Brown Scholarships, about $1,250 per annum, provided for under the will of Permelia Brown, offer aid to unmarried American-born women students, residents of Chicago, Cook County, Illinois. Application should be made to the chairman of the Committee on Permelia Brown Scholarships.

The Civil Government Scholarship yields $200 annually: one prize of $150 and one of $50. The prizes are given on the basis of an examination in the "Civil Government of the United States." The examination is held in November, and is open to all students who have been in residence at least three quarters, who have not more than twelve majors, and who have an average grade of C. No award is made unless the examination mark is at least 80 per cent.

The Colby Scholarships yield full annual tuition fees for five graduates of Wayland Academy.

The Mr. and Mrs. William N. Eisendrath Scholarships, endowed by the children of Mr. and Mrs. William N. Eisendrath, yield about $200 annually, to be awarded to undergraduate or graduate students for their maintenance, aid, or tuition fees.

The Zwinglius Grover Memorial Scholarship, endowed by the Alumnae Association of Dearborn Seminary, yields annual fees for a woman student.

The A. J. Howe Memorial Scholarship yields $50 toward the tuition fees of a University student.

The Kelly Scholarship yields the annual tuition fees for an undergraduate student.

The Haiman Löwy Scholarship yields full annual fees to a young man student, preferably to a student of Jewish faith.

The Walter D. Löwy Scholarship yields full annual fees and is granted to a student of high scholarship, preferably to a person of the Jewish faith.

The Henry C. Lytton Scholarship yields the annual tuition fees.

The Marie J. Mergler Scholarship yields annual fees to a young woman student specializing in Physiology.

The Herbert A. and Harriet E. Morse Aid yields about $140, to be applied to the education of worthy and needy persons desiring to attend or attending the University of Chicago.

The La Verne Noyes Foundation, established July 5, 1918, by the gift of Mr. La Verne Noyes, provides, in the Colleges and in the Graduate and Professional Schools, tuition scholarships (approximately 350) for deserving students who (1) shall themselves have served in the Army or Navy of the United States in the war for liberty into which the Republic entered on April 6, 1917, providing that such service was terminated by honorable discharge; (2) or shall be descendants by blood of anyone in service in the Army or Navy of the United States who served in said war; or (3) shall be descendants by blood of anyone who served in the Army or Navy of the United States in said war, provided that such service was terminated by an honorable death or an honorable discharge. Application should be made to the chairman of the Committee on La Verne Noyes Scholarships.

The Pillsbury Academy Scholarships yield annually tuition fees for five graduates of Pillsbury Academy.

The Joseph Reynolds Scholarships yield $1,455 per year, available in tuition fees for undergraduate men students.

The Scammon Scholarship yields $25 toward the tuition fees of a Chicago student.

The Elbert H. Shirk Scholarship, available for students nominated by the Shirk Estate, Peru, Indiana, yields annual tuition fees.

The Charles H. Smiley Scholarship yields full annual fees and is granted to a student of high scholarship, preferably to a colored student.

The Frederick A. Smith Scholarship Fund, established in 1920 by the will of Judge Frederick A. Smith, of Chicago, provides annually the sum of $1,420. Appointment is made on the basis of scholarship and need. Application should be made before June 1 to the Dean of the Colleges of Arts, Literature, and Science.

The Henry Strong Scholarships, provided for under the will of General Henry Strong, offer aid to students possessing not only zeal for scholarship but also character and those traits tending to leadership. Application should be made to the President before August 1.

The Talcott Scholarships, endowed by Mr. William A. Talcott, of Rockford, Illinois, provide tuition fees to the amount of $600 per year. This fund is reserved for graduate students, preferably graduates of Rockford College.

The Peter Tilton Scholarship yields $50 in tuition fees.

The Joseph Triner Scholarship yields $180 a year and is awarded to a Czechoslovak graduate of a high school of the City of Chicago, who has pursued with distinction at least one year of chemistry in that school, and who is recommended by the principal of the school and approved by the chairman of the Department of Chemistry in the University of Chicago.

The University Scholarship gives full annual fees to a student of high scholarship specializing in Semitics.

The Sydney Walker III Scholarship in Physiology, established by Dr. Sydney Walker, Jr., in memory of his son, yields $200 annually. The nomination is made by the Department of Physiology on the basis of ability and promise in research, and the holder is required to devote the major part of his time to research in Physiology.

The Catherine M. White Scholarships yield annual fees for three students of high scholarship.

The Wyvern Club Scholarship yields tuition fees for one quarter of each year to a woman undergraduate student.

Three scholarships, tuition for one quarter, are awarded to the successful candidates for positions on the Freshman debating team. The trials are held the third Monday in February.

Three Public Speaking Scholarships (tuition fees for one quarter) are granted to the winners in the quarterly Public Speaking Contests in the Junior Colleges.

An Oriental Contest Scholarship, yielding tuition fees for three quarters, is granted annually to a Senior College student.

The University Debate Scholarships provide for the awarding of six scholarships, tuition for the Winter and Spring Quarters following the contests, to the six members of the University debating teams. The trials are held the first Monday in November, competition being limited to undergraduates.

Scholarships in the Medical Courses as prizes for research.—To encourage the investigative spirit and method among prospective medical students in colleges recognized by the University of Chicago, the University offers three or four prize scholarships in the Medical Courses for the best dissertations involving original work in one of the sciences fundamental to medicine: physics, chemistry, or any of the biological branches. Two or three of these are open to under-

graduates only, as follows: the first prize scholarship, a sum equal to the tuition for three quarters ($240); the second scholarship, a sum equal to the tuition for two quarters ($160); and the third scholarship, a sum equal to the tuition for one quarter ($80). Students submitting dissertations in this group must be members of the Senior class of the college which they are attending and must secure the Bachelor's degree from said college and be eligible to enter the Graduate School of the University of Chicago in order to claim the scholarship won.

One prize scholarship, yielding a sum equal to the tuition for three quarters ($240), for a dissertation similar to the above is open only to graduate students in these colleges.

The competition for these prize scholarships in medicine is open only to students in colleges which are on the recognized list of the University of Chicago.

Dissertations must be in the hands of the Dean of Medical Students, University of Chicago, on or before April 1. Further particulars in regard to these scholarships may be had on application to the Dean.

III. ADDITIONAL PROFESSIONAL SCHOOL SCHOLARSHIPS

See the *Circulars of Information* of the schools concerned.

IV. RHODES SCHOLARSHIPS

The Rhodes Scholarships at the University of Oxford are administered by the Rhodes Trust. President Emeritus Harry Pratt Judson is chairman of the committee for the state of Illinois. The secretary is G. E. Hamilton, Western Springs, Illinois. Dean Henry Gordon Gale is chairman of the University of Chicago committee.

B. PRIZES

The Florence James Adams Prizes of $75 and $25 are offered to students in the Senior Colleges for excellence in artistic reading. The competition occurs in the Spring Quarter.

The John Billings Fiske Prize in Poetry, established by Horace Spencer Fiske as a memorial for his father. The prize of approximately $50 is to be awarded annually to the graduate or undergraduate student in any division of the University who presents a poem adjudged best by the head of the English Department, a leading American poet, and a leading American critic.

The David Blair McLaughlin Prize. This prize of approximately $50, the annual net income of $1,000, established in memory of David Blair McLaughlin, 1895–1914, a student in the College of Literature of the Class of 1916, is awarded annually to a student having credit for not more than two years of college work who has shown special skill and sense of form in the writing of English prose. The competition occurs in the Spring Quarter.

The Howard T. Ricketts Prize, about $250, the net annual income of $5,000, is awarded on the third day of May to a student of the University of Chicago presenting the best results in research in Pathology or Bacteriology.

The Rosenberger Medal, founded by Mr. and Mrs. Jesse L. Rosenberger, is awarded by the University of Chicago in recognition of achievement through research, in authorship, in invention, for discovery, for unusual public service, or for anything deemed of great benefit to humanity. If at any time it is thought best, the awards may be restricted preferentially, or even wholly, to persons

connected with the University of Chicago and its various departments, including all the faculty and other instructors, all the students, graduate and undergraduate, and all the graduates both of the University and of all the departments thereof.

The Susan Colver Rosenberger Educational Prizes were established by Jesse L. Rosenberger. Only the income of the endowment may be used. (*a*) One prize to be awarded in one year or at one time, either in connection with the School of Education or such other department of the University as may be deemed best, for a dissertation that shall meet the requirements of the University and give the results of valuable original research on some important phase of education, or else, when thought best, to be awarded for the best practical essay or dissertation produced in competition and treating in some original way some phase of education. (*b*) The next prize to be awarded the next year or time in connection with such other department or departments of the University as may be thought best, as a reward for meritorious original research and an acceptable dissertation, or else competitively for the best essay or dissertation, on some important phase of education or educational principles, needs, or methods. It is particularly desired to encourage original research of a kind to warrant and secure publication. In other words, it is desired to have the prizes awarded alternately as stimuli for constructive study and original research to develop practical ideas for the improvement of educational aims and methods. Awards may be withheld at any time it is thought best, and income or portions of income may be allowed to accumulate or may be added to the permanent principal of the endowment as desired. This endowment is intended to be a special memorial to Susan Colver Rosenberger (Mrs. Jesse L. Rosenberger), to the end that her name may distinctively continue in the cause of education to be something of the inspiration that she herself was in her lifetime.

C. UNIVERSITY SERVICE

I. DEPARTMENTAL SERVICE

Graduate.—A limited number of assignments to service, yielding a part or all of the tuition fees for three quarters, are available for graduate students of attainment and promise. This service is usually rendered in the department in which the student is doing the major part of his work. **Students in departmental service pay their tuition fees in cash at the beginning of each quarter.** At the close of the quarter they receive a cash payment for the amount of the service if it has been satisfactorily rendered.

Assignments of this class are awarded preferably to students who desire to work in a special department rather than to those who desire to pursue general courses.

II. LIBRARY SERVICE

Applicants for positions in Library service are appointed to service by the Libraries. Students holding such appointments must maintain a grade of academic work satisfactory to their Deans and of service satisfactory to the Libraries. Such students are required to pay their fees in cash at the office of the Cashier within the first five days of the quarter. For whatever service they may satisfactorily render they will be paid in cash at the end of the quarter.

III. MISCELLANEOUS SERVICE

Other forms of student service are: (*a*) messenger service at the Information Office, applications for which should be addressed to the Cashier; (*b*) service in the University Choir, applications for which should be addressed to the Director of the University Choir; (*c*) service in the University Band, applications for which should be addressed to the Director of the University Band; (*d*) service in the Commons, the compensation being furnished in board. Inquiries with regard to this service should be addressed to the Director of the Commons; (*e*) temporary stenographic or clerical service for members of the Faculty or administrative officers, and occasionally special service in the laboratories. When such opportunities occur, notices are posted on the bulletin board in front of Cobb Lecture Hall, and detailed information is obtainable at the Employment Bureau.

IV. OUTSIDE EMPLOYMENT

The University maintains an Employment Bureau through which many kinds of work are found for students who are compelled to depend in whole or in part upon their own resources.

D. LOAN FUNDS

From funds created by friends of the University loans are made to many students of worth and promise who need temporary aid. These funds are limited and are usually exhausted early in the academic year.

A special circular entitled *Awards and Aids* will be sent on request. It gives details concerning all the forms of aid, routine of application, etc.

MEDICAL SOCIETIES

The fact that a very large number of medical men practice in Chicago has led to the development of a number of medical societies, general and special. Among the more interesting to medical students in the early years of their course is the Chicago Pathological Society. A large number of clinical societies will interest the student, particularly in the later years of his course.

The University of Chicago Biological Club meets on the second Tuesday evening of each month at 7:45 sharp. At the meetings of this society the advanced work and original research of the various laboratories will be reported, and topics of general medical and scientific interest will be discussed. The meetings are open to medical students. The society holds no meetings during the Summer Quarter.

ALUMNI ASSOCIATION

The Alumni Association of Rush Medical College holds yearly meetings. These meetings precede the regular commencement of the College, which will occur on June 13, 1923. All graduates of the College in good standing are eligible to membership, which can be obtained by the payment of two dollars, the annual dues. The officers for the year ending July 1, 1923, were as follows:

OFFICERS

President—E. L. Kenyon, '96, Chicago
First Vice-President—F. B. Moorehead, '06, Chicago
Second Vice-President—D. H. Wherritt, '02, Chicago
Third Vice-President—Thomas Galloway, '12, Chicago
Necrologist—J. F. Waugh, '04, Chicago
Treasurer—Carl O. Rinder, '13, Chicago
Secretary—Charles A. Parker, '91, 7 W. Madison St., Chicago

DIRECTORS

ONE YEAR

E. L. Kenyon, '96, Chicago
Dean D. Lewis, '99, Chicago

TWO YEARS

Harold N. Moyer, '79, Chicago
Wilber E. Post, '03, Chicago

THREE YEARS

George H. Coleman, '13, Chicago
H. Gideon Wells, '98, Chicago

ALUMNI RELATIONS COMMITTEE

Dr. John Ritter, Chicago, *Chairman*

Dr. L. N. Grosvenor, Huron, S.D.
Dr. W. T. Kradwell, Wauwatosa, Wis.
Dr. Clarence A. Johnson, Los Angeles, Cal.
Dr. N. P. Colwell, Chicago, Ill.
Dr. Franklin E. Wallace, Pueblo, Colo.
Dr. Carl W. Sawyer, Marion, Ohio

ENTERTAINMENT COMMITTEE

Dr. Rudolph W. Holmes, *Chairman*

Dr. E. L. McEwen.
Dr. Ralph W. Webster
Dr. Dean D. Lewis

AUDITING COMMITTEE

Dr. Fred Drury Hollenbeck, *Chairman*

Dr. Albert H. Bauger.

GRADUATES OF THE SESSION OF 1922–23

The degree of Doctor of Medicine was conferred on the following students at the close of the Spring Quarter, June 14, 1922. The students had completed five years of medical work, the fifth year consisting of an acceptable service as an interne in a hospital approved by the faculty of the College:

Florence Dorothea Ames	Cincinnati, Ohio, General Hospital
Carl Wesley Apfelbach	Presbyterian Hospital
Harold Axley	Illinois Central Railroad Hospital
Robert Vivian Baker	Los Angeles County Hospital
Gardner Black	The Queen's Hospital, Honolulu, T.H.
David Mitchell Blum	Michael Reese Hospital

Karl Kasper Borsack	Passavant Memorial and Cook County Hospital
Susan Willard Brown	Cincinnati, Ohio, General Hospital
William Jennings Brown	Cook County Hospital
Clifford Herbert Brush	Alexian Brothers' Hospital
Dean Carl Burns	St. Luke's Hospital
Henry Arthur Callis	St. Louis City Hospital No. 2
Guy Walter Carlson	St. Luke's Hospital
George Arthur Collett	Lutheran Deaconess Hospital
Lewis Allison Curry	Miles City Hospital, Miles City, Mont.
Howard Burtnell Dabbs	The Queen's Hospital, Honolulu, T.H., and Charity Hospital, New Orleans, La.
Harold Oliver Ellis	Los Angeles County Hospital
Lester Edward Garrison	U.S. Veterans' Hospital No. 30
James Arthur Gough	St. Luke's Hospital
Harry Dewey Grossman	Michael Reese Hospital
Elmer William Hagens	Michael Reese Hospital
Clarence Nels Bugge Hatleberg	St. Luke's Hospital
George Henry Christian Hoyer	Evanston Hospital
Irving Edmond Kaufman	Sacramento County Hospital, Sacramento, Cal.
William James Larkin	U.S. Veterans' Hospital No. 30
Louis Leiter	Cook County Hospital
Samuel Lerner	Los Angeles County Hospital
Julius Gordon Levy	Michael Reese Hospital
Benjamin Richard Lokke	Wabash Employees' Hospital, Moberly, Mo.
Leslie MacNaughton	Evanston Hospital
Byron Nixon	Presbyterian Hospital
Walter Lincoln Palmer	Cook County Hospital
Wendell Abel Potter	Lutheran Deaconess Hospital and Milwaukee Children's Hospital
Henry Salvatore Portogallo	Los Angeles County Hospital
Ezra Hazelton Rogers	Columbia Hospital, Milwaukee, Wis.
Gordon Lester Rosene	Michael Reese Hospital
Abraham Happy Rudolph	Cook County Hospital
Earl William Shaffer	Cook County Hospital
Leonard Stanley Sluzynski	Englewood Hospital
William Allen Smiley	Michael Reese Hospital
Clarence Wiley Spears	Norwegian American Hospital
Aaron Schloss Speier	Cook County Hospital
Jules Caesar Stein	Cook County Hospital
Merlin Jones Stone	Thomas D. Dee Memorial Hospital, Ogden, Utah
Beatrice Edna Tucker	Evanston Hospital
Cleveland James White	Illinois Central Railroad Hospital
Emmanuel Bertrand Woolfan	Los Angeles County Hospital
Charles Corbin Yancey	Allegheny General Hospital, Pittsburgh, Pa.
Orus Ray Yoder	Harper Hospital, Detroit, Mich.

At the close of the Summer Quarter, September 1, 1922:

Orville Lee Baldwin	Durand and Evanston Hospitals
Austin David Bates	Presbyterian Hospital
William Cartland Bruff	Harper Hospital, Detroit, Mich., and the Serverance Medical School, Seoul, Korea
William Charles Buchbinder	Cook County Hospital
Francis Robert Conroy	Providence Hospital, Detroit, Mich.
Albert Flower DeGroat	Psychopathic and Evanston Hospitals
Garland Ward Ellis	Wesley Memorial Hospital
Joshua Samuel Goodwin	Los Angeles County Hospital
Roy Grinker	Wesley Memorial and Cook County Hospitals
Alfred Herman Hallmann	Wesley Memorial Hospital
Raymond James Harrington	Allegheny General Hospital, Pittsburgh, Pa.
Samuel Chester Henn, Jr.	The Children's Memorial Hospital
Charles Frederic Inlow	U.S. Veterans' Hospital No. 30
Andrew Conway Ivy	Mercy and Augustana Hospitals
Ruth Lynne King	The Woman's Hospital, Philadelphia, Pa.
Thomas Frederick Krauss	Michael Reese Hospital
Francis Loeffler Lederer	The North Chicago Hospital
Alice McNeal	The Woman's Hospital, Philadelphia, Pa.
Daniel Bartholomeus Malan	Presbyterian Hospital
Frank Martin Patton	Washington Blvd. Hospital
Clarence Henry Payne	St. Louis City Hospital No. 2 and Provident Hospital
E. Stafford Safarik	Los Angeles County Hospital
Clarence Henry Schaller	Columbia Hospital, Milwaukee, Wis.
Paul Henry Stappenbeck	Henry Ford Hospital, Detroit, Mich.
Merritt Paul Starr	Cook County Hospital
Edward Julius Stieglitz	Presbyterian Hospital
Frank Carl Val Dez	Presbyterian Hospital
Hawthorn Collins Wallace	Lutheran Deaconess Hospital
Arthur Herman Weiland	St. Luke's Hospital
Stuart Yntema	Psychopathic and Cook County Hospitals

At the close of the Autumn Quarter, December 21, 1922:

Alfred DeBard Biggs	St. Luke's Hospital
Paul Carrier Blaisdell	Cook County Hospital
Albert Butterman	St. Louis City and Englewood Hospitals
Don Bruce Cameron	St. Luke's Hospital
Arthur Ralph Colwell	U.S. Veterans' Hospital and Presbyterian Hospital
Marshall William Field	Michael Reese Hospital
Arnold Gerhard Isaac	Santa Barbara Cottage Hospital, Santa Barbara, Cal.
Abraham F. Lash	Cook County Hospital
Earl Roach McCarthy	Presbyterian Hospital
Harry Carson Olmsted	Presbyterian and Cook County Hospitals

Howard Martin Sheaff	Presbyterian Hospital
Dean Field Stanley	Cook County Hospital
Earl Alfred Zaus	U.S. Veterans' Hospital No. 30

At the close of the Winter Quarter, March 23, 1923:

Robert James Bowman	St. Vincent's Hospital, Los Angeles, Cal.
Tracy Willis Buckingham	Philadelphia General Hospital, Philadelphia, Pa.
Elton Russell Clarke	Los Angeles County Hospital
Kenneth Cochems	U.S. Veterans' Hospital No. 30
Arthur Vincent Cole	Madison General Hospital, Madison, Wis., and Evanston Hospital
Toney Taylor Crooks	Anna Durand and Norwegian American Hospitals
Artman Hovey Dahle	U.S. Veterans' Hospital No. 30
Morris Edward Davis	Los Angeles County Hospital
Raul delaGarza	Presbyterian Hospital
Lloyd Hamilton Fox	Los Angeles County Hospital
Carl Chesney Gibson	U.S. Veterans' Hospital No. 30 and the South Shore Hospital
Millard Charles Hanson	Evanston Hospital
Morris Wolf Hertzfield	West Suburban Hospital, Oak Park, Ill.
Vernon James Hittner	St. Joseph's Hospital
Herman Harry Huber	Mt. Sinai Hospital, Milwaukee, Wis.
Herbert Haehl Inlow	U.S. Veterans' Hospital No. 30
Andrew Beaumont Johnson	Henry Ford Hospital, Detroit, Mich.
Clarence Emery Johnson	Presbyterian Hospital
Clifford David Lambird	Illinois Central Railroad Hospital
Tadeusz Maryan Larkowski	St. Mary of Nazareth Hospital
Simon W. Luban	San Diego County Hospital and Mt. Zion Hospital, San Francisco, Cal.
James Egan McLoone	Washington Blvd. Hospital
William Herman Meyer	Henry Ford Hospital, Detroit, Mich.
John Peter Muyskens	St. Joseph's Mercy Hospital, Sioux City, Iowa
Frank Simon Lovewell Newcomb	Los Angeles County Hospital
Harold Theodore Pederson	Presbyterian Hospital
Charles Henderson Piper	St. Luke's Hospital
Rob Roy Roberts	Rochester General Hospital, Rochester, N.Y
Abraham Howard Shanberg	Michael Reese Hospital
Morris Stark	Los Angeles County Hospital
John William Sugden	St. Luke's Hospital
Edward Frederick Tierney	Denver City and County Hospital, Denver. Colo.
John Francis Tilleman	Presbyterian and St Joseph's Hospitals
Milton Tobias	Los Angeles County Hospital
Richard Talmage Treadwell	The Queen's Hospital, Honolulu, T.H.
Thomas Gervase Walsh	Mercy and Cook County Hospitals
Allen Smith Watson	St. Joseph's Hospital

The following students received Certificate on the completion of the four years of the Medical Course at the close of the Spring Quarter, June 14, 1922:

Fred Temple Burling	Los Angeles County Hospital
Orwood Jackson Campbell	Presbyterian Hospital
Leo Clifford Clowes	Presbyterian Hospital
George Wayland Coon	St. Joseph's Hospital
James Henry Cryst	Cottage Hospital, Santa Barbara, Cal.
Abraham Clement Eitzen	Kansas City General Hospital, Kansas City, Mo.
Ethel Fanson	Los Angeles County Hospital
Frances Ethel Giles	Baptist Memorial Hospital, Memphis, Tenn., and Chicago Lying In Hospital
Dorothy Grey	Evanston Hospital
Ferdinand Hantsch	Alexian Brothers' Hospital
Jeanette Harrison	Presbyterian Hospital
William Walter Hartman	Buffalo City Hospital, Buffalo, N.Y.
John Harold Hooval	Los Angeles County Hospital
Carl Gilbert Johnson	Cook County Hospital
Lewis I. Kaffesieder	Illinois Steel Company Hospital, Gary, Ind.
Maximilian Bernard Kneussl	Illinois Central Railroad Hospital
Ernest Oliver Larson	Milwaukee or Passavant Hospital, Milwaukee, Wis.
Joseph Elmer Lepke	St. Luke's Hospital
George Cecil Lewis	St. Louis City Hospital No. 2
Joseph Moses Lindenbaum	Los Angeles County Hospital
Walter Henry Maddux	Kansas City General Hospital, Colored Division, Kansas City, Mo.
Ruth Mahon	New England Hospital for Women and Children, Boston, Mass.
Lucille May McConnell	Buffalo City Hospital, Buffalo, N.Y.
Harold Irving Meyer	St. Luke's Hospital
Clara Miller	North Chicago Hospital
John Richard Montague	Washington Blvd. Hospital
Oliver Merritt Moore	Los Angeles County Hospital
Francis Joseph Morris	St. Paul City and County Hospital, St. Paul, Minn.
Oscar Dale Mulliken	Passavant Memorial and Michael Reese Hospitals
Esther Serida Nelson	Buffalo City Hospital, Buffalo, N.Y.
Orrin Van Overton	University Hospital, Madison, Wis.
Charles Nelson Pease	Los Angeles County Hospital
Ethel B. Perry	North Chicago Hospital
Isador Jacob Raphael	Buffalo City Hospital, Buffalo, N.Y.
Dean Loller Rider	Presbyterian Hospital
Robert Henry Smuckler	Mt. Sinai Hospital, Milwaukee, Wis.
Joseph Tours Sperl	Michael Reese Hospital
Harry Albert Staples	Studying in Europe
Harry Benjamin van Dyke	Cook County Hospital

Ralph Thomas Van Tuyl	Lutheran Deaconess Hospital
Daniel Richard Werba	St. Louis City Hospital
Myrta Mae Wilson	Cincinnati General Hospital
Elizabeth Pauline Wolf	Michael Reese Hospital

At the close of the Summer Quarter, September 1, 1922:

James Ulysses Allen	Provident Hospital
Pedro Alvaro Castaing	Municipal Hospital, San Juan, Porto Rico
Noah Fox	Cook County Hospital
Jean Robert Heatherington	U.S. Veterans' Hospital No. 30
Karl Louis Hiss	Presbyterian Hospital
Guy Anderson Hunt	Sacramento Hospital, Sacramento, Cal.
Katsuji Kato	The Children's Memorial Hospital
John Edward Nienhuis	Cincinnati General Hospital, Cincinnati, Ohio, and the Denver City and County Hospital, Denver, Colo.
Clarence Wagner Rainey	Michael Reese Hospital
Gilbert John Schwartz	Presbyterian Hospital
Philip Albright Scott	St. Luke's Hospital
Andrew Joseph Sullivan	Presbyterian Hospital

At the close of the Autumn Quarter, December 21, 1922:

Clarence Francis Clauser	Wesley Memorial Hospital
John Zell Gaston	Presbyterian Hospital
Ralph Lee Harris	Presbyterian Hospital
Harold Edward Johnson	Cincinnati General Hospital, Cincinnati, Ohio
Myra Imogene Mead	Durand and Presbyterian Hospitals
Homer Higgs Whitney	Los Angeles County Hospital
Charlotte Becht Wiedemer	Cincinnati General Hospital, Cincinnati, Ohio
Lawrence John Wilhelmi	Michael Reese Hospital

At the close of the Winter Quarter, March 23, 1923:

Joseph E. Allegretti	Los Angeles County Hospital
James Douglas Alway	Wesley Memorial Hospital
Elmore Russell Bailey	Cook County Hospital
Knowlton Emmons Barber	Presbyterian Hospital
George Alvin Barnett	St. Luke's Hospital
Walter Martin Behn	Illinois Central Railroad Hospital
Zacharias Bercovitz	Los Angeles County Hospital
Bert Ira Beverly	
John Adolph Bigler	Washington Blvd. Hospital
Stella Nason Bodmer	Good Samaritan Hospital, Portland, Ore.
Elmer Louis Boyd	Presbyterian Hospital
Merrick Roblee Breck	Kings County Hospital, Brooklyn, N.Y.
Clarence Frank Gunsaulus Brown	Presbyterian Hospital
Seth Edwin Brown	Michael Reese Hospital
Eben James Carey	

Walter Seong Chinn	Los Angeles County Hospital
Clarence Grover Clippert	Harper Hospital, Detroit, Mich.
Everett Naughtin Collins	Presbyterian Hospital
Henry Harold Conley	St. Joseph's Hospital
Lyle Glenn Craig	Los Angeles County Hospital
Nathan N. Crohn	
Thorald Edward Davidson	St. Paul City and County Hospital, St. Paul, Minn.
Clifford Lester Dougherty	U.S. Veterans' Hospital No. 30
Ralph Wickwire Elston	U.S. Veterans' Hospital No. 30
Emerson Gillespie	St. Joseph's Hospital
Arne Christian Gorder	Evanston Hospital
Gerald Watson Hamilton	Presbyterian Hospital
Adolph Marius Hansen	Los Angeles County Hospital
Arthur Henry Hansen	St. Luke's Hospital
Howard Lancing Hatfield	Los Angeles County Hospital
Victor Josiah Hays	West Suburban Hospital, Oak Park, Ill.
Robert Wing Hemingway	St. Paul City and County Hospital, St. Paul, Minn.
Jalmar M. Hofto	St Paul City and County Hospital, St. Paul, Minn.
Roger Holcomb	Cook County Hospital
Edward Joseph Horick	St. Joseph's Hospital
Roland Arthur Jacobson	St. Joseph's Hospital
William Edward Jahsman	Henry Ford Hospital, Detroit, Mich.
Ernest Lemon Jewell	Madison General Hospital, Madison, Wis.
Paul Myron Kaufman	Youngstown City Hospital, Youngstown, Ohio
Clarence Eugene Kjos	St. Paul City and County Hospital, St. Paul, Minn.
Harold Leo Klawans	Michael Reese Hospital
Irwin Kjelland Krohn	Denver City and County Hospital, Denver, Colo.
Sung Tao Kwan	Peking Union Medical College
Paul Emanuel Landmann	Wesley Memorial Hospital
Ralph Gerald Lommen	Charity Hospital, New Orleans, La.
Samuel Arthur Machlis	Cook County Hospital
Daniel Franklin Milam	Michael Reese Hospital
Fred Nathan Miller	Washington Blvd. Hospital
Benjamin Tell Nelson	Evanston Hospital
Alvah Lay Newcomb	Evanston Hospital
Guy Owens	Wesley Hospital, Wichita, Kansas
Julio Paez	San Diego County Hospital, San Diego, Cal.
Joseph Sandie	Passavant Memorial Hospital and Los Angeles County Hospital
Robert Frederick Schoenbeck	Norwegian American Hospital
Lien Otis Simenstad	St. Paul City and County Hospital, St. Paul, Minn.

Irwin Dave Siminson	Mercy Hospital
Frank Victor Theis	Presbyterian Hospital
Harold L. Thompson	Los Angeles County Hospital
Edgar Cleveland Turner	
William John Vynalek	Henry Ford Hospital, Detroit, Mich., and Cook County Hospital
Beatrice Henrietta Weil	The Children's Memorial Hospital
Frank Laurance Weston	Cook County Hospital
Bertrand Odell Woods	Presbyterian Hospital

MATRICULATES FOR THE SESSION OF 1922–23

The following list includes only those students who were in attendance during one or more quarters, and who were entitled to take the quarterly examinations.

NOTE.—The naming of a degree not followed by the name of an institution in parentheses is understood to mean a degree conferred at the University of Chicago.

Where no institution is named, it is understood to mean that the student began his career as a Junior at the University of Chicago.

Where no state is mentioned, Illinois is understood.

ABBREVIATIONS.—U.=University; C.=College; S.=School; Hs.=High School; A.=Academy; Sm.=Seminary; Inst.=Institute (or Institution).

PERIOD OF RESIDENCE.—*s*=Resident during Summer Quarter, 1922; *a*=Resident during Autumn Quarter, 1922; *w*=Resident during Winter Quarter, 1923; *sp*=Resident during Spring Quarter, 1923.

FRESHMEN AND SOPHOMORES

Adams, Charles Clarence, *a*, *w*, *sp*, Rockford. A.B. (Beloit C.) '12.

Aleshire, Irma, *s*, Carthage. S.B. '22.

Almquist, Carl Oscar Gotfred, *s*, *a*, *w*, *sp*, Loomis, Neb. U. of Nebraska; Senior C.

Altura, Ramon Tenefrancia, *s*, *a*, *w*, *sp*, Philippine Islands, U. of Philippines; Senior C.

Amberson, Julius Martin, *a*, *w*, *sp*, Santa Ana, Cal. U. of North Dakota; E.M. (U. of Montana) '21.

Anderson, Charles Edward, *s*, *a*, *w*, Chicago. B.S. (Coe C.) '10.

Anderson, Ernest Raymond, *s*, Centuria, Wis. A.B. (Gustavus Adolphus C.) '20.

Anderson, Nelson Paul, *a*, *w*, *sp*, Kewanee. Senior C.

Anthony, Benjamin William, *sp*, Crawford, Miss. A.B. (Talladega C.) '22.

Applegate, Clarence Eugene, *a*, *w*, *sp*, Perrysville, Ohio. Wooster C.; Senior C.

Ashby, John Sherman, *s*, *a*, *w*, *sp*, Fairmont, Neb. U. of Nebraska; U. of Iowa; S.B. '22.

Atkinson, Arthur John, *s*, *w*, *sp*, Chicago. S.B. '21.

Baird, Thomas Addison, *a*, *w*, Wichita, Kan. S.B. '22.

Bender, Lauretta, *s*, *a*, *w*, *sp*, La Grange. Stanford U.; S.B. '22, S.M. '23.

Benjamin, Eustace Lincoln, *s*, *a*, *w*, Los Angeles, Cal. Senior C.

Benjamin, Mabel Harriet, *a*, *w*, *sp*, Chicago. Lewis Institute; B.A. (Northwestern U.) '21.

Bennett, James Paul, *sp*, Chicago. S.M. '22.
Benson, Virginia Mary, *s*, *a*, *w*, Chicago. S.B. '22.
Beverly, Dale Ellis, *s*, *a*, *w*, *sp*, Montgomery, Ala. A.B. (Virginia Union U.) '21.
Bianchi, John Joseph, *s*, *a*, *w*, *sp*, Spring Valley. S.B. '22.
Bicknell, Marguerite Elizabeth, *a*, Fort Wayne, Ind. A.B. (Smith C.) '16; N.Y. Post Graduate Medical C.
Bierman, Jessie Marguerite, *a*, *w*, *sp*, Kalispell, Mont. A.B. (U. of Montana) '21.
Blomberg, Thorsten Emil, *sp*, Rockford. Senior C.
Blumenstock, Julius, *s*, *a*, Ludington, Mich. Armour Inst.; S.B. '22.
Bohning, Anne, *a*, *w*, Fort Worth, Texas. A.B. (Smith C.) '15.
Bond, Charles Wesley, *s*, Williamsburg, Ky. S.B. '21.
Boston, Burr, *a*, *w*, *sp*, Waterloo, Iowa. B.S. (Iowa State C.) '22.
Bourquin, Helen, *s*, Aspen, Colo. A.B. (Colorado C.) '15; S.M. '16; Ph.D. '22.
Boyd, Theodore Elliott, *s*, *a*, *w*, *sp*, Ashland City, Tenn. U. of Tennessee; George Peabody C. for Teachers; S.B. '21.
Branham, Sara Elizabeth, *a*, *w*, *sp*, Atlanta, Ga. A.B. (U. of Colorado) '19.
Brannon, Londus Baker, *s*, *a*, *w*, *sp*, Manhattan. Joliet Junior C.; Senior C.
Bronstein, Isadore Pat, *a*, *w*, *sp*, Chicago. S.B. '23.
Brown, Walter Bigelow, *a*, Clinton, Iowa. Coe C.; Junior C.
Brozowsky, Abe, *a*, *w*, *sp*, Indiana Harbor, Ind. Senior C.
Brundage, Owen Kay, *a*, Hammondsport, N.Y. B.S. (Hobart C.) '22.
Bruner, Julian Minassian, *s*, Des Moines, Iowa. S.B. '22.
Brunschwig, Alexander Eichel, *a*, *w*, *sp*, Evansville, Ind. Senior C.
Bullard, Mattie Jane, *sp*, Casselton, N.D. A.B. (Carleton C.) '22.
Burke, Chauncey Greeley, *a*, *w*, *sp*, Fort Smith, Ark. S.B. '23.
Callahan, George Brandle, *s*, *a*, *w*, *sp*, Erwin, Tenn. A.B. (Maryville C.) '20.
Callander, Adelbert, *a*, *w*, *sp*, Delaware, Ohio. Ohio Wesleyan U.; Ohio State U.; S.B. '23.
Campbell, Everett Wayne, *a*, *w*, *sp*, Washington, D.C. U. of Illinois; Senior C.
Campbell, Leo Kempff, *s*, *a*, *w*, *sp*, Frankfort, Ind. S.B. '20.
Cannon, Paul Roberts, *s*, Decatur. A.B. (James Millikin U.) '15.
Carpenter, Ralph Van, *a*, *w*, *sp*, Brazil, Ind. B.A. (DePauw U.) '22.
Carter, Jay Bailey, *s*, Persia, Tenn. S.B. '21.
Chang, Hsi-Chun, *s*, *a*, *w*, *sp*, Peking, China. Tsing-Hua C.; S.B. '23.
Chappell, Paul Francis, *a*, *w*, Elkhart, Ind. Senior C.
Clay, Ernest H., *a*, *w*, *sp*, Quincy, Ohio. A.B. (C. of Puget Sound) '21.
Close, Frank Marion, *a*, *w*, *sp*, Chicago. U. of California; Senior C.
Clover, Phoebe, *a*, *w*, Chicago. S.B. '14.
Comstock, Frank Henry, *sp*, Chicago. B.S. (Lewis Inst.) '22.
Congdon, Charles Bennett, *a*, *w*, *sp*, Hibbing, Minn. U. of Minnesota; Senior C.
Coombs, Robert Adolph, *s*, Chicago. Senior C.
Cooper, Ethel Florence, *s*, Washington. S.B. '16.
Cooper, Finis Gaston, *s*, Selma, Ala. A.B. (Maryville C.) '18.
Copps, Eugene Michael, *a*, *w*, *sp*, Seattle, Wash. Everett Junior C.; U. of Washington; Senior C.
Corkill, Clifford Clayton, *s*, *a*, Chicago. S.B. '22.
Crawford, Robert Acheson, *s*, *a*, *w*, *sp*, Chicago. U. of Illinois; Senior C.
Creswell, Samuel Morton, *s*, *a*, *w*, *sp*, Cedarville, Ohio. Cedarville C.; S.B. '23.

Crossman, Roy Arnold, *s, a, w, sp,* Dorchester, New Brunswick, Canada. A.B. (Mount Allison U.) '19.
Cunningham, Terrence Thomas, *s, a, w,* Seattle, Wash. S.B. '22,
Davis, Margaret, *sp,* Chicago. U. of Tennessee; Columbia C. Senior C.
Davis, William John Nixon, Jr., *a, w, sp,* Chicago, Senior C.
Decker, Fred Henry, *a, w, sp,* Rock Rapids, Iowa. A.B. (Hope C.) '21.
Delaney, Patrick Arthur, *s, a, w, sp,* Bangor, Me. Kirksville State Normal C.; S.B. '21.
Demaree, Eugene Walter, *s, a, w,* Winchester, Ky. Kentucky Wesleyan C.; S.B. '23.
Devney, Clarissa, *a, w, sp,* Pine Island, Minn. Senior C.
De Young, Ward Adrian, *a, w, sp,* Chicago. B.A. (Hope C.) '22.
Doepp, William Clarence, *s,* Blue Island. S.B. '22.
Doty, James Robert, *a, w, sp,* Gary, Ind. Valparaiso U.; Senior C.
Droegemueller, Edmund Henry, *sp,* Itasca. Senior C.
Duncan, John Stephen, *a, w, sp,* Celina, Ohio. B.S. (Hiram C.) '19.
Dunn, Edward Harkless, *a, w, sp,* Cairo. Senior C.
Eddy, Murray Chadwick, *a, w, sp,* Colby, Kan. Kansas State U.; S.B. '23.
Edgeworth, Harriet Isabel, *a, w, sp,* Kankakee, S.M. Columbia U.
Egloff, William Chauncey, *a, w, sp,* Mason City, Iowa. Grinnell C.; Senior C.
Eisendrath, Elsa B., *s, a,* Chicago. Ph.B. '18.
Ellis, James Conrad, *a, w, sp,* West Frankfort. Senior C.
Epstein, Isadore Morris, *a, w, sp,* Lima, Ohio. Mount Union C.; A.B. (Ohio State U.) '21.
Evans, Charles Benjamin Shaffer, *a, w, sp,* Chicago. B.A. (Harvard C.) '21.
Faber, Samuel, *a, w, sp,* Chicago. C. of the City of New York; Senior C.
Farnum, Martha Belle, *a, w, sp,* Ames, Iowa. B.S. (Iowa State C.) '17.
Fenwick Herbert Frederick, *s, a, w,* Chicago. U. of Indiana; S.B. '22.
Ferguson, Arthur Newton, *a, w, sp,* Trenton, Mo. Senior C.
Ferguson, Paul Stewart, *a, w, sp,* Chicago. B.S. (Iowa State U.) '20.
Fikany, Ethel Mary, *s, a, sp,* Denver, Colo. S.B. '17.
Fisher, Nelson Franklin, *s, a, w, sp,* Milton, Pa. Ursinus C.; A.B. (Gettysburg C.) '18.
Forney, John McLaughlin, *a, w, sp,* Chicago. B. A.(U. of Alabama) '22.
Fox, Leda Ruth, *a, w, sp,* River Forest. U. of Illinois; Ph.B. '19; U. of Paris
Frederick, William John, *a, w, sp,* Gulfport, Miss. M.S. (Mississippi A. and M. C.) '19.
Friedmann, Otto Herman, *sp,* Stillwater, Okla. B.S. (Oklahoma A. and M. C.) '20; M.S. (Michigan A. C.) '22.
Fry, Elma May, *a, w, sp,* Valparaiso, Ind. Sessions C.; Valparaiso U.; Senior C.
Gahringer, John Edward, *a, w, sp,* Wenatchee, Wash. U. of Washington; Senior C.
Gaikema, Everett William, *a, w, sp,* Hastings, Mich. A.B. (Hope C.) '22.
Garrett, Margaret Lillian, *a, w, sp,* Nantungchow, China. Drake U.; S.B. '22.
Gault, Joseph Telser, *w, sp,* Chicago. Senior C.
Gilliland, Mary Leota, *s,* Cooter, Mo. S.B. '21.
Ginsburg, Samuel Arthur, *sp,* Pueblo, Colo. Junior C., Kansas City; Senior C.
Goldberg, Benjamin, *s,* Chicago. S.B. '19.

Goode, Ralph Clarence, *a, w, sp,* Chicago. S.B. (Kenyon C.) '15; Kent State Normal C.
Goodman, Leon Jack, *a, w, sp,* Dubuque, Iowa. Senior C.
Gouwens, Willis Eugene, *s, a, w, sp,* South Holland. S.B. '18.
Grauer, Theophil Paul, *a, sp,* Wausau, Wis. S.B. '20.
Gray, Percival Allen, Jr., *s, a, w, sp,* Chicago. S.B. '22.
Green, George Noel, *sp,* Chicago. Ph.G. (Valparaiso U.) '16; Senior C.
Greene, Joseph Major, *a, w, sp,* Chicago. Lewis Inst.; Senior C.
Greene, Lois Dixon, *s, a, w,* Highland Park. A.B. (Grinnell C.) '20.
Greiner, Wallace Reginald, *a, w,* Seattle, Wash. U. of Washington; S.B. '22.
Griffey, Edward Waddy, *s,* Chicago. Valparaiso U.; S.B. '22.
Grimes, John Maurice, *s,* Angola, Ind. Ph.B. '20.
Guibor, George Portle, *sp,* Chicago. D.D.S. (Washington U. School of Dentistry) '18; Senior C.
Gussin, Harry, *w, sp,* Detroit, Mich. S.B. '22.
Hall, James Lowell, *s, a, w, sp,* Chicago. Senior C.
Hayden, Helen, *a, w, sp,* Elgin. Senior C.
Helgeson, Carl John Edward, *a, w, sp,* Chicago. S.B. '18.
Henderson, Philip Harold, *s,* Colville, Wash. S.B. '22.
Heusinkveld, David William, *s,* Fulton. S.B. '21.
Hibbs, Donald Kenneth, *a, w, sp,* Ames, Iowa. M.S. (Iowa State) '21.
Hickman, Harry Edward, *s, a, w, sp,* Meadville, Pa. A.B. (Valparaiso U.) '17; U. of Toulouse (France).
Higbee, Arthur Lloyd, *a, w, sp,* Boone, Iowa. Senior C.
Hightower, Ira Leon, *a,* Marshall, Texas. A.B. (Bishop C.) '22.
Hirsch, Daniel Louis, *w, sp,* Chicago. Senior C.
Hoeppner, Walter Frederick, *a, w, sp,* Chicago Heights. Senior C.
Hogue, Harold Bertram, *a, w, sp,* Chicago. B.S. '23.
Hogue, William Joel, *a, w, sp,* Monmouth. B.S. (Monmouth C.) '22.
Holck, Harold Groth Oxholm, *a, w, sp,* Copenhagen, Denmark. S.B. '21.
Honl, Leonard, Adolph, *sp,* Lidgerwood, N.D. North Dakota Agricultural C.; Senior C.
Hork, Jeanette, *a, w, sp,* La Grange, Senior C.
Howe, Katharine, *a, w,* Dorset, Vt. Wellesley C.; S.B. '22.
Howell, Annette, *a, w, sp,* Chicago. B.A. (Vassar C.) '16; M.A. '18.
Hudson, Noel Paul, *s, a, w, sp,* Wayne City. A.B. (James Millikin U.) '17.
Huene, Nevin, *s, a, w, sp,* Chicago. Los Angeles Junior C.; B.S. '23.
Hurwitz, Rueben, *a, w, sp,* Chicago. Senior C.
Ickstadt, Albert, *a, w, sp,* Tinley Park. Senior C.
Illick, Henry Earle, *s, a, w,* Chicago. A.B. (U. of Michigan) '21.
Jackson, Carl Cook, *sp,* Norman, Okla. B.A. (U. of Oklahoma) '22.
Jenkins, Hilger Perry, *a, w, sp,* Chicago. Senior C.
Jensen, Joseph Edgar, *a, w, sp,* Momence. U. of Illinois; Monmouth C.; S.B. '23.
Jones, Benona Wallace, *s, a, w, sp,* Chicago. Iowa State Normal; Lombard C.; S.B. '22.
Jones, Morris Hunter, *a, w, sp,* Big Spring, Texas. A.B. (U. of Arizona) '21.

Jordan, Edwin Pratt, *sp*, Homewood. Harvard U.; S.B. '23.
Kales, Elizabeth, *a*, *w*, *sp*, Chicago. B.A. (Bryn Mawr C.) '21.
Kartoon, Louis Bernard, *a*, *w*, *sp*, Chicago. Senior C.
Kates, Helen, *a*, *w*, *sp*, Arlington Heights. A.B. (Vassar C.) '18.
Keckich, Thomas Donald, *s*, *a*, *w*, *sp*, Whiting, Ind. Senior C.
Kenyon, Allan Titsworth, *s*, *a*, *w*, *sp*, Aurora. U. of Illinois; S.B. '22.
Kielar, Edward J., *s*, Nanticoke, Pa. S.B. '22.
Kirchner, Ralph Waldo, *s*, *a*, *w*, *sp*, Muncie, Ind. Butler C.; Senior C.
Kiser, Sara Margaret, *w*, *sp*, Chardon, Ohio. Western Reserve U.; S.B. '23.
Klier, Harry Perl, *s*, Newton. Illinois State Normal U.; Senior C.
Kloster, Grant, *s*, *a*, *w*, *sp*, Forest City, Iowa. S.B. '20.
Klugman, Maurice Charles, *sp*, Chicago. Lewis Inst.; Senior C.
Kroener, William Frederick, *s*, *a*, *w*, Santa Ana, Cal. S.B. '22.
Krueger, Arvid Mitchell, *s*, Chicago. Senior C.
Kukuraitus, Stella Lucille, *sp*, Chicago. Senior C.
Kunde, Margarete Meta Hedwig, *w*, *sp*, Lacy, S.D. A.B. (U. of Nebraska) '17; S.B. (*ibid.*) '19.
Ladd, Robert Lelon, *a*, *w*, *sp*, Ipava. A.B. (Park C.) '20.
Lai, Daniel Gan, *s*, Yungtenhsien, China. A.B. (Shanghai Baptist C.) '18; S.B. '21.
Lauer, Marvin Sigmund, *a*, *w*, *sp*, Des Moines, Iowa. Drake U.; S.B. '22.
Lawton, Stanley Edward, *a*, *w*, *sp*, Chicago. Senior C.
Leader, Samuel Albert, *s*, *a*, *w*, *sp*, Chicago. Crane Junior C.; S.B. '21.
Leong, Ellen Fook len, *a*, *w*, *sp*, Honolulu, T.H. U. of Michigan; Senior C.
Levy, Moreno Jona, *s*, *a*, *w*, *sp*, Jenien Moshe, Jerusalem, Palestine. Jewish Teachers' Training C.; Senior C.
Lichtenstein, Manuel Emil, *s*, Chicago. Crane Junior C.; S.B. '21.
Lieberthal, Frederick, *a*, *w*, *sp*, Chicago. A.B. (Harvard U.) '22.
Lillie, Catharine Crane, *w*, *sp*, Chicago. Vassar C.; Ph.B. '21.
Lillie, Margaret Halsted, *a*, *w*, *sp*, Chicago, Mt. Holyoke C.; S.B. '23.
Litt, Sol, *s*, *a*, *w*, *sp*, Chicago. S.B. '22.
Logsdon, Glenn Taylor, *s*, Wichita, Kan. S.B. '22.
Loring, Mark Lucas, *a*, *w*, *sp*, Valparaiso, Ind. U. of Michigan; Senior C.
Lund, Arthur Edward, *s*, Chicago. Lewis Inst.; S.B. '22.
Lundy, Clayton Jackson, *a*, *w*, *sp*, Chicago. Senior C.
MacCallum, Daniel Bartlett, *s*, *a*, *w*, *sp*, Decatur. S.B. '20.
MacClatchie, Leslie Keith, *sp*, Chicago. Senior C.
McCarthy, Charlotte, *s*, Evanston. S.B. '21.
McCarthy, James Edward, *a*, *w*, *sp*, Beloit, Wis. B.A. (Beloit C.) '22.
McCleery, Thomas Sandrock, *a*, *w*, *sp*, Exeter, Neb. U. of Nebraska; Senior C.
McDonald, Angus Cameron, *a*, *w*, *sp*, Cherokee, Iowa. A.B. (Grinnell C.) '21.
McDonald, Tony Mark, *s*, *a*, *w*, Severy, Kan. S.B. '09.
McKay, William Monroe, *a*, *w*, Ogden, Utah. Weber C.; Senior C.
McKinney, Ruth, *s*, *a*, *w*, *sp*, Springdale, Ark. James Millikin U.; Senior C.
McMillan, William Marcus, *a*, *w*, Orin, Wash. U. of Washington; S.B. '22.
MacPherson, Daniel Allan, *a*, *w*, *sp*, Providence, R.I. S.M. (Brown U.) '20; Rockefeller Inst.

Madsen, August Henry, *a, w,* Wayne, Neb. U. of Nebraska; S.B. '22.
Marks, Morton Green, *s,* Chicago. S.B. '22.
Marquis, Vincent Brush, *sp,* Bloomington. Illinois State Normal; Illinois Wesleyan; Ohio State; B.S. (U. of Illinois) '20.
Masten, Mabel, *a, w, sp,* Darlington, Wis. S.B. '21.
Mead, Irene Tufts, *a, w, sp,* Chicago. A.B. '15.
Meagher, Richard Hayes, *s, a, w, sp,* Chicago. Ph.B. (Yale Sheffield Scientific School) '21.
Mei, Yi-Lillie, *s, a, w, sp,* Tientsin, China. Tsing Hua C.; S.B. '23.
Meng, Chi Mao, *s, a, w, sp,* Tientsin, China. Tsing Hua C.; Senior C.
Meyer, Howard Maurice, *a, w, sp,* Chicago. U. of Illinois; Senior C.
Meyer, Marshall William, *a, w, sp,* Chicago. Senior C.
Milbacher, Walter Herman, *a, w, sp,* Aurora. Senior C.
Miller, Wilfred Stare, *s,* Decatur. A.B. (James Millikin U.) '19.
Miner, William Richard, *a, w, sp,* Georgetown, Ky. A.B. (Georgetown C.) '20.
Mitchell, Bryan Lee, *a, w, sp,* Indianola, Iowa. A.B. (Simpson C.) '21.
Morrow, Cecil Loveland, *a, w, sp,* Wenatchee, Wash. U. of Washington; Senior C.
Mrazek, Vernon Elmer Leo, *a, w,* Chicago. S.B. '22.
Mussil, Julius Joseph, *s,* Chicago. Diploma, U.S. Military Academy, West Point, '18.
Narmonta, Lindyta Phyllis, *a,* Chicago. Northwestern U.; Senior C.
Nethercut, Glenway Warren, *s, a, w, sp,* Wauwatosa, Wis. A.B. (Oberlin C.) '21
Newfield, Semon Ullman, *a, w, sp,* Birmingham, Ala. A.B. (Howard C.) '21.
Noble, Barclay Elijah, *a, w, sp,* Ames, Iowa. B.S. (Iowa State C.) '22.
Nordlander, Thure Alexander, *s,* Chicago. S.B. '21.
Norman, Edith Emilie, *s, a, w,* Peotone. S.B. '18.
Olson, Elmer Julius, *s, a,* Chicago. Senior C.
Ouda, Priscilla Anna, *sp,* Chicago. Senior C.
Parker, Charles Dustin, *a, w, sp,* Chicago. S.B. '21.
Parmelee, Jane Middleton, *s,* Chicago. S.B. '19.
Parr, Leland Wilbur, *a, w, sp,* Chicago. Drake U.; S.B. '16.
Parsons, Eloise, *s, a,* Roswell, N.M. A.B. (Randolph-Macon Woman's C.) '17.
Partch, Wallace Taylor, *a, w, sp,* Chicago. A.B. (Oberlin C.) '21.
Partridge, Clyde Elmer, *s, a, w, sp,* Topeka, Kan. A.B. (Washburn C.) '16.
Peacock, Silber Charles, *s,* Quincy. S.B. (Knox C.) '20.
Pearcy, James Frank, *s,* Portland, Ore. S.B. '22.
Pendleton, Walter Raymond, *a, w, sp,* Long Beach, Cal. U. of Southern California; Senior C.
Perlstein, Meyer, *sp,* Chicago. Senior C.
Perry, Solomon Paul, *a, w, sp,* Elkins, W.Va. A.B. (Davis and Elkins C.) '21.
Perzik, Samuel Louis, *a, w,* Oak Park. Fort Monroe Officers Training School; S.B. '22.
Phillips, Kenneth, *s, a, w, sp,* Ogden, Utah. North Pacific C.; Oregon Agricultural C.; S.B. '22.
Phillips, Minnie Alice, *s,* Mattoon. A.B. (U. of Illinois) '17.
Phy, Mark Tenney, *s, a, w,* Union, Ore. Washington State C. Senior C.

Pierce, Mila Ione, *s*, Chicago. S.B. '22.
Porter, Nancy Foster, *a*, *w*, *sp*, Hubbard Woods. B.A. (Bryn Mawr C.) '21.
Potter, Truman Squire, *s*, *a*, *w*, *sp*, Chicago. S.B. '22.
Pousma, Richard Hettema, *a*, *w*, *sp*, Chicago. A.B. (Calvin C.) '20.
Proctor, David Thornton, *s*, *a*, *w*, Nampa, Idaho. S.B. '21.
Pulsifer, Libby, *a*, *w*, *sp*, Skawhegan, Me. A.B. (Colby C.) '21.
Purdum, Frederick Paine, *s*, *a*, *w*, *sp*, Butler, Pa. Franklin C.; S.B. '23.
Radzinski, John Marion, *s*, *sp*, Chicago. Senior C.
Rawson, Erroll Whitman, *s*, *a*, *w*, *sp*, Seattle, Wash. S.B. (U. of Washington) '19.
Reich, Adolphe Benjamin, *a*, *w*, *sp*, Chicago. Senior C.
Remmert, Arthur Theodore George, *s*, Springfield, Minn. S.B. '21.
Rhoads, Paul Spottswood, *s*, Terre Haute, Ind. S.B. '22.
Richter, Richard Biddle, *s*, La Porte, Ind. S.B. '22.
Rider, Jeanette Leszczynski, *a*, *w*, *sp*, Chicago. Senior C.
Rislow, Helen, *s*, Belvidere. S.B. '20.
Robins, Rufus Benjamin, Jr., *a*, *w*, *sp*, Ozan, Ark. S.B. (Hendrix C.) '21; Washington U.
Rogers, James Creighton Thomas, *a*, *w*, *sp*, Moline. Eureka C.; B.S. (Knox C.) '20.
Rosenbloom, Philip Jack, *s*, Superior, Wis. S.B. '21.
Ross, Bertha Louise, *s*, *a*, *w*, *sp*, Bethel, Conn. A.B. (Hunter C.) '19.
Ryerson, Paul Martin, *a*, *w*, *sp*, Burt, Iowa. Morningside C.; Senior C.
Salladay, Isaiah Reed, *s*, *a*, *w*, Ainsworth, Iowa. S.B. '22.
Seyfarth, Mac Harper, *s*, *a*, *w*, *sp*, Freeport. Senior C.
Shannon, Charles Edward, *a*, *w*, *sp*, Chicago. Senior C.
Shaw, James Wallace, *a*, *w*, *sp*, Topeka, Kan. Cooper C.; B.A. (Kansas U.) '20.
Sheffield, Loren Clark, *s*, *a*, *w*, *sp*, Greenfield, S.B. '22.
Simkin, Maurice, *a*, *w*, *sp*, Chicago. Lewis Inst. S.B. '22.
Simkin, William, *a*, *w*, *sp*, Chicago. Lewis Inst. S.B. '22.
Sloan, Leigh Edmund, *s*, Kalispell, Mont. S.B. '21.
Smith, Alice May, *s*, *a*, *w*, Atlanta, Ga. A.B. (Agnes Scott C.) '17.
Smith, Warren Braman, *s*, Waukesha, Wis. A.B. (Carroll C.) '12.
Spelbring, Paul Greenwood, *a*, *w*, *sp*, Silver City, Iowa. A.B. (Knox C.) '18.
Spencer, William Levi, *sp*, Gilman. Senior C.
Sperry, Frederick Lewis, *a*, *w*, *sp*, Oak Park. B.A. (U. of Wisconsin) '21.
Somerfeld, Esther, *a*, *w*, *sp*, Chicago. Senior C.
Steinberg, Meyer Jerome, *a*, *w*, *sp*, Chicago. Senior C.
Stevens, Walter Leslie, *s*, *a*, *w*, *sp*, Los Angeles, Cal. A.B. (U. of Southern California) '20; U. of South Carolina.
Stewart, Nell Elizabeth, *s*, *a*, *w*, Pueblo, Colo. S.B. '15.
Stieglitz, Kathleen Burns Muir, *s*, Roseau, Minn. S.B. '21.
Stoll, John Esher, *s*, *a*, *w*, *sp*, Chicago. S.B. '21.
Stormont, Daniel Lytle, *s*, *a*, *w*, *sp*, Princeton, Ind. A.B. (Geneva C.) '21.
Sudan, Archer Chester, *s*, *a*, *w*, *sp*, Chicago. S.B. '22.
Taymour, Joseph, *sp*, Chicago. Senior C.
Tetrev, Jaroslav, *sp*, Chicago. Senior C.
Thomas, Riley Fisher, Jr., *s*, Port Gibson, Miss. Alcorn A. and M. C.; S.B. '22.

Thomas, Stanley Worthington, *w, sp,* Washington, D.C. Howard U.; Senior C.
Tower, Lucia Elizabeth, *s,* Chicago. S.B. '20.
Tower, Sarah Sheldon, *s, a, w, sp,* Chicago. S.B. '22.
Turner, Edward Lewis, *s, a, w, sp,* Payette, Idaho. U. of Idaho; S.B. '22, S.M. '23.
Turner, George Cleveland, *s,* Cherokee, Iowa. S.B. '22.
Vandel, Dwight Tedcastle, *a, w, sp,* Kansas City, Mo. S.B. '22.
Vaughn, Arkell Meyers, *s,* Greenville. S.B. '21.
Vermeren, John Cyrille, *a, w, sp,* Chicago. Catholic U. of America; Senior C.
Wagoner, Frank Floyd, *s, a, w,* Chicago. S.B. '22.
Wakefield, Howard, *s,* Chicago. S.B. '17.
Wakerlin, George Earle, *a, w, sp,* Chicago. Senior C.
Wallen, James Elisha, *a, w, sp,* Parsons, Kan. B.A. (Baker U.) '22.
Waner, William Leo, *a, w, sp,* Florence, Kan. U. of Kansas; S.B. '23.
Ward, Harrison Frederick, *s,* Valparaiso, Ind. S.B. '22.
Weeter, Harry Montgomery, *s,* Rimersburg, Pa. A.B. (Allegheny C.) '11; M.S. (U. of Illinois) '17.
Weinstein, L. Seymour, *a, w, sp,* Chicago. Senior C.
Widder, George McAllister, *s, a, w, sp,* Harrisburg, Pa. S.B. (Gettysburg C.) '20.
Wildman, Herbert Arthur, *s, a, w, sp,* Ranger, Texas. U. of Illinois; S.B. '22.
Willems, Jacob Daniel, *a, w, sp,* Chicago. S.B. '22.
Winslow, Wallace Owsley, *a,* Chicago. A.B. (Oberlin C.) '21.
Woizeske, Ray Andrew, *s, a, w, sp,* Peoria. Bradley Polytechnic Inst.; S.B. '22.
Wolffson, Sol., *a, w,* Fort Worth, Texas. Texas Christian U.; S.B. '22.
Zavertnik, John Joseph, *s,* Chicago. S.B. '20.
Zeisler, Ernest Bloomfield, *sp,* Chicago. S.B. '19; Ph.D. '22.

MEN—237 WOMEN—55 TOTAL—292

SPECIAL STUDENTS TAKING MEDICAL COURSES

Ackerman, Lloyd, *s,* Upper Montclair, N.J. A.B. (U. of Colorado) '20.
Aldrich, Alfred Leland, *s,* Chicago. Hamlin U.; Northwestern U. Medical S.
Allison, Inga Marie Katrine, *w,* Fort Collins, Colo. Ed.B. '05.
Anderson, R. M., *s,* Minneapolis, Minn. A.B. (Macalester C.) '20; U. of Minnesota Medical S.
Austin, William Clardy, *s, a,* Clinton, S.C. A.B. (Presbyterian C. of South Carolina) '15; M.A. (*ibid.*) '16.
Bailey, John Hayes, *a, w,* Chicago. Junior C.
Barlow, Anna, *s,* Little Rock, Arkansas. A.B. (Henderson-Brown C.) '19.
Barrow, Elva, *a,* Ferrum, Va. A.B. (Randolph-Macon Woman's C.) '11.
Bauer, Virginia Lew, *s,* Columbia, Mo. S.B. (U. of Missouri) '19; S.M. '21.
Bell, William Proctor, *s,* Cincinnati, Ohio. A.B. (Harvard U.) '20.
Bengston, Gilbert Clarence, *sp,* Hordville, Neb. A.B. (Gustavus Adolphus C.)
Benson, Mildred Harriet, *s,* Omaha, Neb. Senior C.
Bishop, Mabel, *w,* Rockford. A.B. (Wellesley C.) '05; A.M. (Smith C.) '08.
Bitter, Charles Raymond, *s,* Toledo, Ohio.

Black, Harold Chittenden, *sp*, Hammond, Ind. B.A. (U. of Kansas) '18.
Blake, Clyde George, *s*, Chicago. Loyola U. S. of Medicine.
Boikansky, William, *sp*, Chicago. Lewis Inst.; Senior C.
Bolles, Laura Jane, *w*, Brookings, S.D. S.B. '16; S.M. '22.
Boor, Alden Kinney, *s*, Sandusky, Ohio. S.B. (Stetson U.) '13.
Bourn, Janet Macfarlane, *a*, Pawtucket, R.I. Ph.B. (Brown U.) '16.
Bourquin, Anne, *a*, *w*, *sp*, Chicago. S.B. '19.
Brandenburg, Kenneth Charles, *s*, Austin. U. of Illinois; Crane Jr. C.
Breeze, John Lucius, *s*, Columbus, Ohio. A.B. (Ohio State U.) '22.
Breslich, Paul Jean, *a*, *w*, Chicago; Junior C.
Brown, Olen Edwin, *s*, Dallas, Tex. U. of Texas; Baylor U.; Baylor U. Medical School.
Buice, William Alfred, *s*, Farmersville, Tex. Baylor U.; U. of Texas.
Burroughs, Travis Pollard, *s*, Columbia, Mo. A.B. (U. of Missouri) '17.
Caldwell, Hugh McIntyre, *s*, Paynette, Wis. A.B. (U. of Wisconsin) '21.
Camenisch, Solon William, *w*, *sp*, Chicago. Lewis Inst.; Senior C.
Chilcote, Russell Cooper, *s*, Los Angeles, Cal. A.B. (Stanford U.) '21.
Clemens, Louise Isabel, *s*, East Lansing, Mich. B.S. (Mich. Agriculture C.) '13.
Cochems, Frank Mathias, *sp*, St. Anthony, Idaho. U. of Idaho; Senior C.
Connell, Isee Lee, *s*, Birmingham, Ala. A.B. (Howard C.) '20.
Conrad, Clyde Kenneth, *s*, Chicago. U. of Illinois; U. of Illinois Medical S.
Corwin, Robert Flinn, *s*, Ansonia, Ohio. Ohio State U. Medical S.
Coyle, Helen Carol, *sp*, Gridley. Senior C.
Crisler, George Russell, *a*, Normal. Senior C.
Dack, Gail Monroe, *a*, Elgin. B.S. (U. of Illinois) '22.
Da Costa, Esther Ventura Noah, *sp*, Forest Park. Senior C.
Davis, Chester, *s*, Indianapolis, Ind. A.B. (Butler C.) '18.
Davis, Garland Hale Barr, *s*, Lexington, Ky. A.B. (U. of Kentucky) '21; M.S. (*ibid.*) '22.
Davis, George Earl, *s*, Mishawaka, Ind. A.B. (Indiana U.) '14.
Deviney, Ezda, *s*, Julian, N.C. A.B. (North Carolina C. for Women) '19.
Dexter, John Smith, *s*, Elroy, Wis. A.B. (Ripon C.) '08; M.A. (U. of Wisconsin) '09; Ph.D. (Columbia U.) '14.
Dill, Loran Henry, *sp*, Pawnee. Senior C.
Dillon, Charles A., *s*, *a*, Tulsa, Okla.
Domm, Lincoln V., *a*, Ayton, Ontario. A.B. (North Western C.) '21.
Douglas, Robert James, *s*, Chicago. Knox C.; U. of Illinois Medical S.
Dow, William Alexander, *w*, *sp*, Indianapolis, Ind. A.B. (Indiana State Normal) '18.
Downs, Cornelia Mitchell, *s*, Lawrence, Kan. A.B. (Kansas U.) '15; A.M. (*ibid.*) '20.
Drabkin, Charles, *s*, Los Angeles, Cal. A.B. (Stanford U.) '22.
Drain, Brooks Daniel, *s*, Amherst, Mass. B.S. (Ohio State U.) '17.
Duffy, Joseph Thomas, *s*, Waterloo, Iowa. Dubuque C.
Duran, Mariano Escalante, *s*, Costa Rica. Northwestern U. Medical S.; Senior C.
Dwyer, Thomas Leo, *s*, Chicago. St. Louis U.; Loyola U. Medical S.
Edwards, Clarence Owen, *s*, Prono, Utah. Brigham Young U.

Elvidge, Abraham Jonis, *s*, *a*, New York City. U. of Bellevue Medical C.
Essenberg, Jacob Martin, *s*, Chicago. B.S. (Valparaiso U.) '13.
Ets, Harold Norris, *s*, Irondequoit, N.Y. B.S. (U. of Rochester) '20.
Evans, Charles Clayton, *s*, Stevens Point, Wis. B.S. (Ohio Wesleyan U.) '08.
Falls, Arthur Grand Pre, *s*, Chicago. Northwestern U. Medical School.
Fauley, Gordon Brown, *a*, Oregon City, Ore. U. of Oregon; Oregon Agriculture C.; Senior C.
Faulkner, Kenneth, *s*, Waynetown, Ind. B.A. (Indiana U.) '18.
Felger, Walter Blaine, *s*, Canton, Ohio. A.B. (U. of Illinois.) '16; Johns Hopkins U. Medical S.
Felsher, Myron Isaac, *a*, Chicago. Junior C.
Felsher, Rose Zachary, *sp*, Chicago. Senior C.
Finkle, Albert Mark, *s*, Chicago. Loyola U. Medical School.
Fleer, Emma Albertine Mathilde, *a*, *w*, *sp*, Milwaukee, Wis. Senior C.
Flexner, Louis Barkhouse, *w*, *sp*, Chicago. S.B. '22.
Floyd, Lucius Perry, *w*, Denton, Tex. B.S. (Peabody C.) '18.
French, Beals Ensign Litchfield, *a*, *sp*, Ellicottville, N.Y. B.S. (Alfred U.) '13.
Frank, Margaret, *w*, Columbus, Ohio. S.B. (Ohio State U.) '14.
Friedman, Maurice Harold, *a*, Gary, Ind. Western Dental C.; Senior C.
Garcia, Antonio, *s*, Manila. A.B. (Atenco de Manila) '12.
Gates, Percival Taylor, *w*, Chicago. S.B. '22.
Geisler, William Herman, *s*, Chicago. George Washington U. Medical S.
Gevirtz, Milton B, *s*, Whiting, Ind. U. of Illinois C. of Medicine.
Gibbons, Rebekah Meonoghan, *a*, *w*, *sp*, State College, Pa. B.S. (Cornell U.) '13. M.S. (Pennsylvania State C.) '21.
Gist, Elizabeth Colver, *a*, *w*, *sp*, Wellsburg, W.Va. A.B. (Goucher C.) '10.
Gordon, Emma Viola, *s*, Lamanda Park, Cal. B.A. (U. of California) '20.
Graham, Hugh Cornelius, *s*, *a*, *w*, *sp*, Fayetteville, N.C. A.B. (U. of Tulsa) '21.
Gray, Otto Earl, *w*, Browns. Transylvania C.; Valparaiso U.; Senior C.
Groesbeck, William Maynard, *s*, Dalton, Mass. B.S. (Colgate U.) '17.
Gunter, William Adams, *s*, Montgomery, Ala. B.S. (U. of Alabama) '22.
Gurevitz, Eli, *w*, *sp*, Chicago. Senior C.
Gyllenhaal, Vida Louise, *a*, Glenview. Senior C.
Hannah, William Sessions, *s*, Montgomery, Ala. A.B. (U. of Alabama) '20; Tulane Medical School; Johns Hopkins Medical School.
Harcourt, Roy Adolphus, *s*, Chicago. Northwestern U. Medical S.
Harms, Herbert August, *s*, Lawrence, Kan. A.B. (U. of Kansas) '21.
Harned, Ben King, *s*, Hopkinsville, Ky. B.S. (Emory U.) '22.
Hassig, Cecil Edwards, *s*, Chicago. Loyola U. Medical S.
Hays, Bertha Beatrice, *a*, *sp*, Mount Vernon, Ohio. B.S. (Ohio State U.) '18.
Hazeltine, Matthew Emery, *s*, San Jose, Cal. S.B. (U. of California) '16; Stanford U. Medical S.
Hejinian, Lucea Marian, *s*, *a*, *w*, Anamosa, Iowa. B.A. (Mt. Holyoke C.) '21.
Hellerman, Leslie, *w*, *sp*, Hammond, Ind. S.B. '17.
Helm, James Otis, *s*, Columbia, Mo. U. of Missouri Medical S.
Hess, Anton Philip, *a*, Chicago. Senior C.
Hinton, Henry David, *w*, Greenville. B.S. (Illinois C.) '19.

Hitch, Lola Sevilla, *w*, Seaford, Del. B.S. (Northwestern U.) '07.
Hoeft, Gerald L., *s*, Carroll, Iowa.
Horr, Worthie Harold, *s*, Lawrence, Kan. A.B. (U. of Kansas) '22.
Houseman, Burton C., *s*, Findlay, Ohio. Western Reserve U. Medical S.
Howard, Robert Lowe, *s*, Richmond, Va. A.B. (U. of South Dakota) '17; M.S. (U. of Iowa) '19.
Hudgens, Helen Inez, *s*, Ipswich, Mass. B.A. (Tufts C.) '20.
Hulett, Arthur Still, *s*, *a*, Chicago. Ohio State U.
Humiston, Homer Wheeler, *s*, Chicago. Crane Jr. C.
Hutch, John William, *s*, Marlboro, Mass.
Jackson, Thomas, *s*, Chicago. B.S. (Alma C.) '20.
Janovsky, Felix Bohumil, *w*, *sp*, Chicago. Senior C.
Jerkowsky, Morris Solomon, *s*, Chicago. U. of Illinois Medical S.
Jo, Kiichi, *w*, Hawaii. Senior C.
Johnsen, Sigurd Walter, *s*, Chicago. S.B. '21.
Johnson, Alf Cornelius, *s*, Grand Forks, N.Dak. U. of North Dakota Medical S.
Jones, Barclay Lincoln, *sp*, Westtoun, Pa. Ph.B. (Brown U.) '16.
Jones, Robert Gerald, *s*, Toledo. Chicago College of Dental Surgery.
Jones, Isaac Jarrette, *s*, Little Rock, Ark. M.D. (Dept. of Med., U. of Arkansas) '89.
Kanai, Paul Hideichi, *a*, *w*, *sp*, Hawaii. Senior C.
Kauffman, Samuel Hopkins, *s*, Rochester, N.Y.
Kelekian, Hampar, *a*, U. of Dubuque; Junior C.
Kennedy, Raymond James, *w*, Joliet. Joliet Junior C.
Kesler, Margaret, *s*, Nashville, Tenn. A.B. (Baylor U.) '17.
Kerr, Phylis, *s*, *a*, Staten Island, N.Y. Columbia U.; Senior C.
Keye, John Dudley, *w*, *sp*, Fargo, N.D. B.S. (Fargo C.) '20.
Kindred, Gladys Martin, *a*, *w*, *sp*, Meadow Grove, Neb. B.A. (Vassar C.) '17.
King, Henry James, *s*, East Auburn, Cal. B.S. (Kirksville, Mo., Normal S.) '11; A.B. (*ibid.*) '12; A.M. (U. of Missouri) '13.
Kirshman, Forrest Earl, *a*, Indianapolis, Ind. Senior C.
Klamsteiner, Marie Emilie, *s*, Chicago. S.B. '22.
Kleitman, Nathaniel, *w*, *sp*, Augusta, Ga. B.S. (C. of City of New York) '19; A.M. (Columbia U.) '20.
Kluzak, John F., *w*, Cicero. St. Ignatius C.; Loyola U.
Knowlton, Kathryn, *w*, *sp*, Oberlin, Ohio. B.A. (Oberlin C.) '21.
Kolter, Bernard Charles, *s*, Chicago. Marquette U.; St. Ignatius C.; Loyola U. Medical S.
Koppenaal, William Paul, *s*, Holland, Mich. A.B. (Hope C.) '20; Northwestern U. Medical S.
Kotershall, Edward Frank, *s*, Cleveland, Ohio. Western Reserve U. Medical S.
Kraus, Adrian, *sp*, Chicago. S.B. '22.
Kraus, Ida, *s*, *a*, *w*, Chicago. S.B. '18.
Kraut, Harry, *sp*, Chicago. Lewis Inst.; Senior C.
Kruezer, Titus, *w*, *sp*, New Richland, Minn.
Lambert, Avery Eldorno, *s*, University, Ala. S.B. (Dartmouth C.) '02; Ph.D. (*ibid.*) '06.

Larson, Edward, *s*, Galva. B.S. (U. of Illinois) '20; M.S. (U. of Iowa).
LaRue, Ward, *s*, Marion, Ind. A.B. (Butler C.) '22.
Laughton, Nelles Boyd, *s*, London, Ontario. A.B. (Toronto U.) '21; Western U. Medical S.
Lawler, Edmund Griffen, *s*, Chicago. Loyola U. Medical S.; Northwestern U. Medical S.
Lawrence, Zonga Wallen, *a*, Chicago. S.B. '15.
Leach, Luther Orland, *s*, South Fort Smith, Ark. B.A. (U. of Arkansas) '20; S.M. '22.
Leggett, Elizabeth A., *s*, Fairfield, Iowa. B.S. (U. of Minnesota) '21.
Levis, John William, *a*, Chicago. Loyola U. School of Medicine.
Levy, David, *sp*, Chicago. Senior C.
Lewerenz, Carl Theodore, *s*, *a*, Chicago. Senior C.
Lieberman, Arnold Leo, *a*, *w*, Gary, Ind. Senior C.
Lien, Arthur Edward, *s*, Chicago. Loyola U. Medical S.
Lipschitz, Leon, *s*, St. Louis, Mo. Washington U. Medical S.
Ludeman, Helen Anna, *w*, *sp*, Gainesville, Tex. B.A. (U. of Texas) '22.
MacGaffey, Crighton, *w*, Chicago. Senior C.
McCracken, Robert Franklin, *s*, Richmond, Va. B.S. (Military C. of South Carolina) '03; A.M. (Columbia U.) '10. Medical College of Virginia.
McCreary, Otto, *s*, Pullman, Wash. B.S. (U. of Washington) '07.
McGrath, James Frank, *s*, Chicago. S.B. '15; S.M. '20.
McIntosh, Herbert, *s*, Russell, Manitoba. B.A. (Queen's University) '12; M.A. (*ibid.*) '20.
McLaughlin, Laura Ida, *a*, *sp*, Galesburg. A.B. (U. of Nebraska) '04; S.M. '16.
McNair, James Birtley, *a*, *w*, *sp*, Los Angeles, Cal. A.B. (U. of California) '16; A.M. (*ibid.*) '17.
Mann, Allie Belle, *sp*, Atlanta, Ga. A.B. (Goucher C.) '03.
Marcy, Henry Cutter, *a*, Chicago. Senior C.
Marshall, Ernest Jones, *s*, Washington, D.C. Williams C.; A.B. (U. of Michigan) '08.
Marshall, Oscar Chauncey, *s*, China, Cal. A.B. (Stanford U.) '22.
Matthis, Paul Givens, *s*, Jefferson, Tex.
Mayer, Jacob DaCosta, *a*, Chicago. Lewis Inst.; Senior C.
Mead, Henry Castle Albert, *sp*, Chicago. Ph.B. '16.
Melges, Fred Julius, *a*, Redwood Falls, Minn. Lewis Inst. Senior C.
Merillat, Irene Socialista, *s*, Sleepy Eye, Minn. Ward-Belmont C.; Northwestern U.; Senior C.
Meyer, Raymond John, *s*, Chicago. U. of Illinois C. of Medicine.
Miller, Clayton O., *s*, Chicago. U. of Illinois C. of Medicine.
Miller, Clemmy Olin, *w*, *sp*, Chicago. A.B. (Manchester C.) '20.
Miller, Margaret Elizabeth, *w*, Chicago. A.B. (Smith C.) '10.
Miller, Samuel K., *s*, Chicago. U. of Michigan Medical S.
Mooney, Belle S., *s*, Kansas City, Mo. M.D. (Kansas City Hom. Med. C.) '02.
Motyca, Lawrence John, *s*, Dolgeville, N.Y. B.S. (Cornell U.) '14.
Moore, Howard Roswald, *s*, Chicago. S.B. '21; S.M. '22.
Mounce, George Douglas, *a*, La Salle. A.B. (U. of Illinois) '13.

Muirhead, Robert Mowatt, *a*, Moose Jaw, Sask. B.Sc. (U. of Saskatchewan) '22.
Murphy, Rex Leo, *s*, Omaha, Neb. Eclectic Medical C.; Nebraska C. of Med.
Newburn, Lawrence, *w*, Atchison, Kan. A.B. (College of Emporia) '22.
Newton, Harry Paul, *s*, Georgetown, Ky. B.A. (Baylor U.) '18; M.A. (*ibid.*) '19.
Nichols, Mabel Frances, *s*, Munfordville, Ky. B.S. (Georgetown C.)
Noll, William Clarence, *s*, York, Neb. A.B. (York C.); A.M. (U. of Nebraska) '15.
Overby, Rudolph William, *s*, Moorhead, Minn. S.B. (Fargo C.) '19; Northwestern U. Medical S.
Oxley, George Leonard, *s*, Cincinnati, Ohio. U. of Cincinnati Medical S.
Pace, Earle Rupert, *s*, New Market, Iowa. Northwestern U. Medical S.
Pedersen, Anna Marie, *a*, Carpenter, S.D. Dakota Wesleyan University.
Phillips, Royal, *s*, Cincinnati, Ohio. U. of Cincinnati Medical S.
Plummer, Beulah Alexia, *s*, Lowell, Ind. B.S. (Northwestern U.) '11.
Plzak, Louis Frank, *a*, Cicero. University of Illinois; Crane Junior C.; Senior C.
Podzinikova, Masa, *a*, Czechoslovakia. A.B. (Vassar C.) '22.
Polhamus, Lillian Alberta, *sp*, Fort Wayne, Ind. Senior C.
Price, Dorothy, *a*, Oak Park. S.B. '22.
Quinn, John Patrick, *s*, Keeseville, N.Y. Loyola U.; Lewis Inst.; Chicago C. of Dental Surgery.
Ramsay, Samuel Watson, *s*, Chicago. S.B. (Loyola U.) '21.
Rankin, Frank Stephen, *s*, *a*, Chicago. U. of Illinois C. of Medicine.
Ray, Thomas William, Jr., *w*, *sp*, Waller, Tex. B.A. (U. of Texas) '16; M.A. (*ibid.*) '17.
Reaves, George Lester, *a*, Detroit. Morehouse C.; U. of Michigan; Lewis Inst.
Rife, Dwight William, *w*, *sp*, Naperville, North-Western C.; Lewis Inst.
Ritchie, Iner Sheld, *s*, Loma Linda, Cal. Pacific C. of Osteopathy; M.D. (C. of Medical Evangelists) '19; U. of Tulane; New York Post Graduate Medical S.
Roberts, Lydia Jane, *a*, Martin, Mich. Ph.B. '17; S.M. '19.
Rockwell, John Gunderson, *w*, Homer, Neb. A.B. (Stanford U.) '18.
Rogers, Jesse P., *s*, Chicago. U. of Illinois Medical S.
Rogers, William Lester, *s*, Hayward, Cal.
Rosenberg, Robert, *s*, Chicago. U. of Illinois Medical S.; Stanford U. Medical S.
Rost, Alice Evelyn, *w*, Chicago. Senior C.
Ruebhausen, Ella, *a*, *w*, *sp*, Milwaukee, Wis. S.B. (U. of Wisconsin) '93; Ph.D. '15.
Rush, Homer P., *s*, Portland, Ore. M.D. (U. of Oregon Medical S.) '21.
Sand, Anthony Lawrence, *a*, Springfield. Junior C.
Sander, Irwin William, *sp*, Canton, Ohio. A.B. (Hiram C.) '22.
Sawani, Raghbir Singh, *a*, Punjab, India. U. of Punjab; U. of Missouri.
Schirmer, William, *s*, Charleston, S.C. Clemson A. and M. C.
Schorr, Arthur, *sp*, Chicago. Lewis Institute.
Schroeder, Meta Louise, *w*, *sp*, Wausau, Wis. B.S. (U. of Wisconsin) '20; M.S. (*ibid.*) '21.
Scull, Ralph Horace, *a*, *sp*, Galveston, Texas. B.S. (Wilberforce U.); Senior C.
Seron, Zaven, *a*, Joliet, Joliet Junior C.; Senior C.

Shields, Alfred Joseph Nelson, *s*, Brooklyn, N.Y. Northwestern U.; Lewis Inst.; Senior C.
Shilling, Ida May, *sp*, Troy, Ohio. B.S. (Ohio State U.) '10.
Shlenker, Lenard L., *s*, *a*, Fort Smith, Ark. Senior C.
Siliciano, Andrew Robert, *s*, Chicago. Columbia U.; Boston U.
Singer, Charlotte, *w*, *sp*, Chicago.
Slazinski, Leo William, *s*, Detroit. U. of Michigan.
Smith, Margaret Elizabeth, *s*, Edmonton, Alberta. Truro Normal C.; Mt. Allison Ladies C.; Ph.B. '19.
Snider, George Thomas, *s*, Chicago. Senior C.
Spensley, Helen Heap, *s*, Berwyn. Senior C.
Spruth, Henry C., *w*., Chicago. S.B. '23.
Stiefel, Richard Adolph, *s*, Berea, Ohio. A.B. (Baldwin-Wallace C.) '22.
Steagall, Mary Minerva, *s*, Golconda. Ph.B. '05; M.S. '22.
Stenn, Arthur, *a*, *sp*, Chicago. Senior C.
Stern, Edward Alexander, *s*, Fargo, N.D. A.B. (Harvard C.) '19.
Stuck, Florence, *s*, *a*, Jonesboro, Ark. Randolph-Macon Woman's C.; B.S. (Hendrix C.) '21.
Stukey, Grover Cleveland, *s*, Kirksville, Mo. B.S. (Kirksville State Teacher's C.)
Sullivan, Howard Patrick, *s*, Chicago.
Sweeney, Leo Patrick Augustine, *s*, Ardock N.D. U. of North Dakota.
Swickard, William M., *a*, *w*, Newman, S.B. '21.
Teninga, Tonetta, *s*, Chicago. A.B. (Hope C.) '21.
Tilt, Jennie, *a*, *sp*, West Lafayette, Ind, S.B. (Purdue U.) '07; S.M. (*ibid.*) '10.
Ury, Boris Sergei, *a*, Chicago. Junior C.
Van Zante, Peter, *a*, Leighton, Iowa. Junior C.
Vener, Hyman I., *s*, Chicago. U. of Illinois Medical S.
Weitz, Augustine Henry, *s*, Pittsburgh, Pa. B.S. (Carnegie Inst. of Technology) '15.
Welton, Frank Aldis, *w*, Wooster, Ohio. B.S. (Buchtel C.) '04; S.M. (Ohio State U.) '16.
Westlund, Ruth Elvira, *sp*, Chicago. Purdue U.; S.B. '23.
Wexler, Leo, *sp*, Chicago. Lewis Inst.; Junior C.
Willoughby, Evelyn, *s*, Knoxville, Tenn, B.A. (U. of Tennessee) '19.
Wittmayer, Edwin Emanuel, *a*, Fargo C.; Senior C.
Woehrle, John Wesley, *s*, Wilkes Barre, Pa. Penn. State C.; U. of Pennsylvania.
Wooster, Margaret, *s*, Silver Creek, Neb. A.B. (U. of Nebraska) '13; A.M. (*ibid.*) '15.
Yohe, Forrest Roberts, *s*, Mount Erie. Loyola Medical S.
Young, Elrid Gordon, *s*, London, Ont. A.B. (McGill U.) '16; M.S. (*ibid.*) '19; Ph.D. (Cambridge U.) '21.

MEN—194 WOMEN—56 TOTAL—250

JUNIORS

Adams, Numa, *s*, *a*, *w*, Chicago. A.B. (Howard U.) '11; A.M. (Columbia U.) '12.
Aleshire, Irma, *sp*, Carthage. Senior C.
Alexander, Henry Preston, *a*, *w*, *sp*, Jonesville, Mich. S.B. '21.

Andelson, Mayo Morris, *a*, *w*, *sp*, Chicago. S.B. '22.
Anderson, Charles Edward, *sp*, Chicago. S.B. (Coe C.) '10.
Anderson, Ernest Raymond, *a*, *w*, *sp*, Centuria, Wis. A.B. (Gustavus Adolphus C.) '20.
Atkinson, Arthur John, *a*, Chicago. S.B. '21.
Baird, Thomas Addison, *sp*, Wichita, Kan. S.B. '22.
Baker, William Jesse, *s*, *a*, Quincy. S.B. (Knox C.) '17.
Barker, Nelson Waite, *a*, *w*, *sp*, Evanston. A.B. (Dartmouth C.) '21.
Belt, Robert Leroy, *a*, *w*, *sp*, Wellsville, Tenn. A.B. (Maryville C.) '20.
Benson, Virginia Mary, *sp*, Chicago. Senior C.
Berry, Joseph Alonzo, *a*, *w*, *sp*, Charleston, S.C. A.B. (Fisk C.) '19; S.B. '21.
Bohning, Anne, *sp*, Fort Worth, Texas. A.B. (Smith C.) '15.
Bolin, Robert, *a*, *w*, *sp*, Grassflat, Pa. A.B. (U. of South Dakota) '19.
Bond, Charles Wesley, *a*, *w*, *sp*, Williamsburg, Ky. S.B. '21.
Bowles, John Herschel, *a*, *w*, *sp*, Sheldon. S.B. (U. of Wisconsin) '22.
Bowles, Ray McCune, *a*, *w*, Mounds, Okla. S.B. '20.
Brandstadt, Wayne Glassburn, *a*, Oak Park. S.B. '21.
Brown, Clarence Baxter, *a*, *w*, *sp*, Highland, Wis. S.B. (U. of Wisconsin) '22.
Bump, Warner Smith, *s*, Madison, Wis. S.B. (U. of Wisconsin) '21.
Burnight, Ernest Robert, *s*, *a*, Los Angeles, Cal. A.B. (U. of Southern California) '17.
Bussey, Frederick Newton, *a*, *w*, *sp*, Chicago. S.B. (U. of Wisconsin) '22.
Campbell, Everette Lowell, *a*, *w*, *sp*, Madison, Wis. S.B. (U. of Wisconsin) '21; M.S. (*ibid.*) '22.
Carey, Eben James, *s*, Los Angeles, Cal. S.B. (Creighton U.) '17; S.M. (*ibid.*) '18; Sc.D. (*ibid.*) '20.
Carlson, Guy Edwin, *a*, *w*, Stromsburg, Neb. A.B. (Grand Island C.) '15.
Carter, Jay Bailey, *a*, *w*, *sp*, Persia, Tenn. S.B. '21.
Carter, William Noble, *s*, *a*, Los Angeles, Cal. S.B. '20.
Chinn, Clarence Cheong, *a*, *w*, *sp*, Honolulu, T.H. S.B. '21.
Clark, Darrell Grant, *a*, *w*, Ogden, Utah. S.B. '22.
Clover, Phoebe, *sp*, Chicago. S.B. '14.
Connell, Arthur John, *s*, Beloit, Wis. S.B. (Beloit C.) '19; M.S. (U. of Wisconsin) '21.
Cooley, Frank Henry, *a*, *w*, *sp*, Sioux Falls, S.D. A.B. (U. of South Dakota) '21.
Coombs, Robert Adolph, *a*, *w*, *sp*, Chicago. Senior C.
Cooper, Ethel Florence, *a*, *w*, *sp*, Washington. S.B. '16.
Cooper, Finis Gaston, *a*, *w*, *sp*, Selma, Ala. A.B. (Maryville C.) '18.
Corkill, Clifford Clayton, *sp*, Chicago. S.B. '22.
Costa, Frank John, *s*, *a*, Tampa, Fla. S.B. '21.
Craig, Alfred Leslie, *s*, Long Beach, Cal. S.B. '20.
Crawford, Howard Everett, *a*, *w*, *sp*, Powell, Wyo. S.B. '22.
Cunningham, Terrence Thomas, *sp*, Seattle, Wash. S.B. '22.
Demaree, Eugene Walter, *sp*, Winchester, Ky. S.B. (Kentucky Wesleyan C.) '21.
Doepp, William Clarence, *a*, *w*, *sp*, Blue Island. S.B. '22.
Edwards, Wilmer Charles, *a*, *w*, *sp*, Marion, Wis. A.B. (U. of Wisconsin) '21; M.S. (*ibid.*) '22.
Eggert, Fred Otto Emil, *a*, *w*, Chicago. S.B. '22.

Ellis, Ivan George, *a*, *w*, *sp*, Milwaukee, Wis. S.B. (U. of Wisconsin) '22.
Ellwood, Paul Murdock, *a*, *w*, *sp*, South Bend, Ind. S.B. '22.
Emerson, Adolph Herman, *a*, *w*, *sp*, LaCrosse, Wis. A.B. (U. of Wisconsin) '22.
Erikson, Ralph Wennerberg, *s*, *a*, Fairfield, Ala. S.B. '21.
Fenwick, Herbert Frederick, *sp*, Chicago. U. of Indiana; Senior C.
Ferguson, Eugene Hobart, *a*, *w*, *sp*, Zionsville, Ind. S.B. '21.
Finkelstein, Belle, *a*, *w*, Chicago. S.B. '16.
Frankenthal, Jr. Lester Emanuel, *a*, *w*, *sp*, Chicago. Ph.B. (Sheffield Scientific S.) '20.
Friedman, Harry, *a*, *w*, *sp*, Chicago. S.B. '22.
Gasul, Benjamin Morris, *a*, *w*, *sp*, Kenosha, Wis. S.B. (U. of Wisconsin) '22.
Gerard, Ralph Waldo, *a*, *w*, *sp*, Chicago. Ph.D. '21.
Gilliland, Mary Leota, *a*, *w*, *sp*, Cooter, Mo. S.B. '21.
Goldberg, Benjamin, *a*, *w*, *sp*, Chicago. S.B. '19.
Gordon, David King, *a*, Chicago. S.B. '22.
Greene, Lois Dixon, *sp*, Highland Park. A.B. (Grinnell C.) '20.
Greiner, Wallace Reginald, *sp*, Seattle, Wash. Senior C.
Griffey, Edward Waddy, *a*, *w*, *sp*, Chicago. S.B. '22.
Grimes, John Maurice, *a*, *w*, *sp*, Angola, Ind. Ph.B. '20.
Harville, Clifford Henry, *a*, *w*, *sp*, Eau Claire, Wis.
Haupt, Mary Alden Morgan, *a*, *w*, Chicago. A.B. (Bryn Mawr C.) '12; A.M. (Columbia U.) '19.
Hawkins, Winfred Weeden, *s*, Lawrence, Kan. A.B. (U. of Missouri) '13; A.M. (*ibid.*) '14.
Heidner, Frederick Carl, *a*, *w*, *sp*, West Bend, Wis. S.B. (U. of Wisconsin) '22.
Henderson, Philip Harold, *a*, *w*, *sp*, Colville, Wash. S.B. '22.
Homme, Owen Halvor, *a*, *w*, Echo, Minn. A.B. (St. Olaf C.) '17.
Huang, Tse Fang, *a*, Kulangsu, Amoy, China, S.B. '21; S.M. '22.
Illick, Henry Earle, *sp*, Chicago. A.B. (U. of Michigan) '21.
Jacobs, Merrill Ralph, *a*, *w*, *sp*, Chicago. S.B. '22.
Janson, Carl Helge, *a*, *w*, *sp*, Blue Island. S.B. '22.
Johnston, Robert Lee, *s*, Wilmington, N.C. A.B. (Trinity C.) '20.
Johnstone, Robert Henry, *a*, *w*, *sp*, Grand Forks, N.D. S.B. (U. of North Dakota) '22.
Jonker, William John, *a*, *w*, *sp*, Chicago. A.B. (Calvin C.) '19.
Kabayao, Doroteo Solis, *a*, *w*, Iloilo Iloilo, P.I. S.B. '22.
Kiley, Matthew Joseph, *a*, *w*, *sp*, Saratoga Springs, N.Y. S.B. '22.
King, Eugene Pargny, *s*, *w*, *sp*, Louisville, Ky. S.B. (Fisk U.) '16.
Kjos, Clarence Eugene, *s*, Mayville, N.D. A.B. (U. of North Dakota) '21.
Klier, Harry Perl, *a*, *w*, *sp*, Newton. Senior C.
Kroener, William Frederick, *sp*, Santa Ana, Cal. S.B. '22.
Krueger, Arvid Mitchell, *a*, *w*, *sp*, Chicago. S.B. '22.
Kunde, Margarete Meta Hedwig, *a*, Lacy, S.D. A.B. (U. of Nebraska) '17; S.B. (*ibid.*) '19.
LaBier, Clarence Russell, *a*, *w*, *sp*, Terre Haute, Ind. A.B. (U. of Illinois) '20.
Lai, Daniel Gan, *a*, *w*, *sp*, Yungtenhsien, China. A.B. (Shanghai Baptist C.) '18; S.B. '21.
LaMont, Wyant, *a*, *w*, *sp*, Chicago. S.B. '22.

Lauer, Marvin Sigmund, *sp*, Des Moines, Iowa. Senior C.
Lawrence, John V., *s*, Terre Haute, Ind.
Leichenger, Harry, *s*, *a*, Chicago. S.B. '22.
Leventhal, Meyer Leo, *a*, *w*, *sp*, Chicago. S.B. '22.
Lichtenstein, Manuel Emil, *a*, *w*, *sp*, Chicago. S.B. '22.
Lintner, Roy Christian, *a*, Chicago. S.B. (Northwestern U.) '19.
Long, Esmond Ray, *sp*, Evanston. A.B. '11; Ph.D. '13.
Love, Abraham Isaac, *a*, *w*, *sp*, Chicago. S.B. '22.
Lund, Arthur Edward, *a*, *w*, *sp*, Mason City, Iowa. S.B. '22.
Lyons, Joanna, *a*, *w*, *sp*, Chicago. S.B. '22.
Macdonald, Carolyn, *a*, *w*, Chicago. S.B. '22.
McCarthy, Charlotte, *a*, *w*, *sp*, Evanston. S.B. '21.
McCartney, James Lincoln, *s*, *a*, Chicago. S.B. '21; M.S. '23.
McKay, William Monroe, *sp*, Ogden, Utah. Senior C.
McKie, Mildred Winnifreed, *a*, *w*, *sp*, Northboro, Iowa. S.B. (Tarkio C.) '18.
Madsen, August Henry, *sp*, Wayne, Neb. Senior C.
Manly, Marian, *a*, *w*, *sp*, Delaware, Ohio. A.B. (Ohio Wesleyan U.) '19.
Marks, Morton Green, *a*, *w*, *sp*, Chicago. S.B. '22.
Mason, Rebecca Holton, *a*, *w*, *sp*, Chicago. A.B. (U. of Minnesota) '16.
Matheson, Abe, *a*, Chicago. S.B. '21.
Mead, Irene Tufts, *sp*, Chicago. A.B. '15.
Moffat, William McKee, *s*, *a*, Fort Wayne, Ind. A.B. (Lafayette C.) '15.
Morris, George Edward, *a*, *w*, Burlington, Iowa. S.B. '22.
Munger, Jr. Elbert Ervin, *a*, *w*, *sp*, Spencer, Iowa. S.B. '21.
Murphy, George Thomas, *s*, *a*, Chicago. A.B. (U. of Illinois) '20.
Mussil, Julius Joseph, *a*, *w*, *sp*, Chicago. Diploma, U.S. Military Academy, West Point, '18.
Nickel, Allen Arthur Clarence, *a*, Milwaukee, Wis. S.B. (North-Western C.) '15.
Nomland, Ruben, *a*, *w*, *sp*, Grand Forks, N.D. S.B. (U. of North Dakota) '22.
Nordlander, Thure Alexander, *a*, *w*, *sp*, Chicago. S.B. '21.
Olmsted, Randolph Francis, *a*, *w*, *sp*, Grand Forks, N.D. S.B. (U. of North Dakota) '22.
Olson, Ernest C., *s*, *a*, Chicago. S.B. '22.
Pangburn, Merrill Walter, *a*, *w*, *sp*, Fraulkton, S.D. S.B. (U. of South Dakota) '22.
Parsons, Eloise, *a*, *w*, *sp*, Roswell, N.M. A.B. (Randolph-Macon Woman's C.) '17.
Peacock, Silber Charles, *a*, *w*, *sp*, Quincy. S.B. (Knox C.) '20; S.M. '22.
Perzik, Samuel Louis, *sp*, Oak Park. Senior C.
Peterson, Evan Adolph, *a*, *w*, *sp*, Galesburg. S.B. (Knox C.) '20.
Peterson, Lyndle Wilson, *a*, *w*, *sp*, Shawano, Wis. S.B. (U. of Wisconsin) '22.
Phillips, Lyle Graham, *a*, *w*, *sp*, Madison, Wis. S.B. (U. of Wisconsin) '22.
Phillips, Minnie Alice, *a*, *w*, *sp*, Mattoon. A.B. (U. of Illinois) '17.
Phy, Mark Tenney, *sp*, Union, Ore. Senior C.
Pick, John Francis, *s*, *a*, Chicago. S.B. '22.
Pierce, Mila Ione, *a*, *w*, *sp*, Chicago. S.B. '22.
Pieroth, John Philip, *a*, *w*, *sp*, Ellensburg, Wash.

Proctor, David Thornton, *sp*, Nampa, Idaho. S.B. '21.
Reed, Clarence C., *a*, *w*, *sp*, Chicago. A.B. (Mt. Union C.) '16.
Remmert, Arthur Theodore George, *a*, *w*, *sp*, Springfield, Minn. S.B. '21.
Rennick, Charles Finley, *a*, *w*, *sp*, Paducah, Ky. S.B. '22.
Rhoades, Paul Spottswood, *a*, *w*, *sp*, Terre Haute, Ind. S.B. '22.
Richter, Richard Biddle, *a*, *w*, *sp*, La Porte, Ind. S.B. '22.
River, Louis Philip, *a*, *w*, *sp*, Chicago. S.B. '22.
Robinson, William Witten, *a*, *w*, Spokane, Wash. S.B. '21.
Rosenbloom, Philip Jack, *s*, *a*, Superior, Wis. S.B. '21; M.S. '23.
Rukstinat, George John, *a*, *w*, *sp*, Chicago. S.B. '22.
Rygh, Edgar A., *a*, *w*, *sp*, Minneapolis, Minn. A.B. (U. of Wisconsin) '21; A.M. (*ibid.*) '22.
Salladay, Isaiah Reed, *sp*, Ainsworth, Iowa. Senior C.
Sanford, Heyworth Naylor, *s*, *a*, Portland, Ore. S.B. '21.
Schneller, Edwin Jacob, *a*, *w*, *sp*, Prairie du Sac, Wis. S.B. (North-Western C.) '16; M.S. (U. of Wisconsin) '22.
Schutz, Elmer Scenas, *a*, *w*, *sp*, Pandora, Ohio. A.B. (Otterbein C.) '18.
Serra, Americo Colón, *a*, *s*, *w*, Ponce, P.R. S.B. '21.
Setzer, George Warren, *s*, *a*, *w*, Chicago. S.B. '21.
Shapiro, William W., *a*, *w*, *sp*, Chicago. Senior C.
Simkin, Maurice, *sp*, Chicago. Senior C.
Simkin, William, *sp*, Chicago. Senior C.
Smedal, Erling Arnold, *a*, *w*, *sp*, McFarland, Wis. S.B. (U. of Wisconsin) '22.
Smith, Alice May, *sp*, Atlanta, Ga. A.B. (Agnes Scott C.) '17.
Smith, Harold Edward, *s*, *a*, Maywood. S.B. '21.
Stegeman, Wilson, *a*, *w*, *sp*, Holland, Mich. S.B. '19.
Steinberg, Milton, *a*, Chicago. S.B. '22.
Stewart, Nell Elizabeth, *sp*, Pueblo, Colo. S.B. '15.
Stieglitz, Kathleen Burns Muir, *a*, *w*, *sp*, Chicago. S.B. '21.
Stoll, John Esher, *w*, *sp*, Chicago. S.B. '21.
Thomas, Jr., Riley Fisher, *a*, *w*, *sp*, Port Gibson, Miss. S.B. '22.
Thurlimann, Otmar, *a*, *w*, *sp*, Chicago. S.B. '22.
Tower, Lucia Elizabeth, *a*, *w*, *sp*, Chicago. S.B. '20.
Trapp, Anthony Nicholas, *a*, *w*, *sp*, Garrett, Ind. S.B. '22.
Turner, George Cleveland, *a*, *w*, *sp*, Cherokee, Iowa. S.B. '22.
Van Hazel, Willard, *a*, *w*, *sp*, Grand Rapids, Mich, S.B. (Hope C.) '20.
Vaughn, Arkell Meyers, *a*, *w*, *sp*, Greenville. S.B. '21; S.M. '22.
Vetten, Cornelius Nicholas, *a*, *w*, *sp*, Sheboygan, Wis. S.B. (U. of Wisconsin) '22.
Wagoner, Frank Floyd, *sp*, Chicago. S.B. '22.
Wair, Donald, *a*, *w*, Chicago. S.B. '21.
Wakefield, Howard, *a*, *w*, *sp*, Chicago. S.B. '17.
Ward, Harrison Frederick, *a*, *w*, *sp*, Valparaiso, Ind. S.B. '22.
Warden, Marine Ruffner, *sp*, Lyons, Kan. Senior C.
Weiss, Jacob Allan, *a*, *w*, *sp*, Chicago. S.B. '22.
Wilson, Arthur Nash, *a*, *w*, *sp*, Pueblo, Colo. A.B. (Colorado C.) '20.
Wilson, Margaret Elizabeth, *a*, *w*, *sp*, Chicago. Ph.D. (Northwestern U.) '21.
Wolffson, Sol, *sp*, Fort Worth, Tex. Senior C.

Woodman, Thomas Winfrey, *a, w, sp,* Phoenix, Ariz. S.B. '22.
Zavertnik, John Joseph, *a, w,* Hinsdale. S.B. '20.
Zerbolio, Dominic Joseph, *a, w, sp,* Benld. S.B. '22.
Ziskind, Eugene, *a, w,* Chicago. S.B. '21.

MEN—122 WOMEN—22 TOTAL—144

SENIORS

Adams, Numa, *sp,* Chicago. A.B. (Howard U.) '11; A.M. (Columbia U.) '12.
Allegretti, Joseph B., *s, a, w,* Chicago. S.B. '21.
Allen, James Ulysses, *s,* Chicago. S.B. (Howard U.) '14; S.B. '20.
Alway, James Douglas, *s, a, w,* Aberdeen, S.D. A.B. (U. of South Dakota) '21.
Andrews, Herbert, *a, w, sp,* Regina, Sask., Canada. A.B. (U. of Saskatchewan) '19.
Bailey, Elmore Russell, *s, a, w,* Omaha, Neb. S.B. '20.
Baker, William Jesse, *w, sp,* Quincy. S.B. (Knox C.) '17.
Barber, Knowlton Emmons, *s, a, w,* Cleveland, Ohio. S.B. (Ohio State U.) '21.
Barnett, George Alvin, *s, a, w,* Indianapolis, Ind. A.B. (Franklin C.) '17.
Behn, Walter Martin, *s, a, w,* Gary, Ind. S.B. '21.
Bercovitz, Zacharias, *s, a, w,* Los Angeles, Cal. S.B. '20; S.M. '20.
Bernhardt, Edmound L., *a, w, sp,* Wilton, Wis. S.B. (U. of Wisconsin) '21.
Beverly, Bert Ira, *s, a, w,* Oak Park. A.B. (U. of Michigan) '16; A.M. (*ibid.*) '17.
Bigler, John Adolph, *s, a, w,* Chippewa Falls, Wis. S.B. (U. of Wisconsin) '21.
Binswanger, Herbert Frank *a, w, sp,* St. Joseph, Mo. S.B. '21.
Bodmer, Stella Nason, *a, w,* La Grande, Ore. S.B. '20.
Bowles, Ray McCune, *sp,* Mounds, Okla. S.B. '20.
Boyd, Elmer Louis, *s, a, w,* Norris City. S.B. '21.
Brandstadt, Wayne Glassburn, *w, sp,* Oak Park. S.B. '21.
Breck, Merrick Roblee, *s, a, w,* El Paso, Texas. S.B. '21.
Brown, Clarence Frank Gunsaulus, *s, a, w,* Chicago. S.B. '19.
Brown, Seth Edwin, *s, a, w,* Tripp, S.D. A.B. (U. of South Dakota) '21.
Bump, Warner Smith, *a, w, sp,* Madison, Wis. S.B. (U. of Wisconsin) '21.
Burnight, Ernest Robert, *w, sp,* Los Angeles, Cal. A.B. (U. of Southern California) '17.
Caldwell, Hugh McIntyre, *a, w, sp,* Poynette, Wis. A.B. (U. of Wisconsin) '21.
Carey, Earl Stafford, *s, a, w, sp,* Chicago. S.B. '20.
Carey, Eben James, *a, w,* Los Angeles, Cal. S.B. (Creighton U.) '17; S.M. (*ibid.*) '18; ScD. (*ibid.*) '20.
Carlson, Guy Edwin, *sp,* Stromsburg, Neb. A.B. (Grand Island C.) '15.
Carpenter, Earl Eugene, *a, w, sp,* Superior, Wis. S.B. (U. of Wisconsin) '21.
Carter, William Noble, *w, sp,* Los Angeles, Cal. S.B. '20.
Castaing, Pedro Alvaro, *s,* Ponce, P.R. S.B. '21.
Caylor, Truman E., *a, w, sp,* Bluffton, Ind. S.B. (U. of Wisconsin) '21.
Chinn, Walter Seong, *s, a, w,* Honolulu, T.H. S.B. '21.
Clark, Darrell Grant, *sp,* Ogden, Utah. S.B. '22.
Clauser, Clarence Francis, *s, a,* Bridgewater, S.D. S.B. '21.
Clippert, Clarence Grover, *s, a, w,* Detroit, Mich. S.B. (Michigan Agricultural C.) '10.
Collins, Everett Naughtin, *s, a, w,* Fennville, Mich. S.B. '19.

Conley, Henry Harold, *s, a, w,* Cazenovia, Wis. S.B. (U. of Wisconsin) '22.
Connell, Arthur John, *a, w, sp,* Beloit, Wis. S.B. (Beloit C.) '19; M.S. (U. of Wisconsin) '21.
Cope, Henry Erwin, *a, w, sp,* Chicago. S.B. '16.
Corr, William Philip, *a, w, sp,* Juneau, Wis. A.B. (U. of Wisconsin) '21.
Corrington, Dale Donatus, *a, w, sp,* Mt. Vernon, S.D. A.B. (U. of South Dakota) '21.
Costa, Frank John, *w, sp,* Tampa, Fla. S.B. '21.
Craig, Alfred Leslie, *a, w, sp,* Long Beach, Cal. S.B. '20.
Craig, Lyle Glenn, *s, a, w,* Canon City, Colo. S.B. (Monmouth C.) '19.
Crohn, Nathan N., *s, a, w,* Chicago. S.B. '21.
Crowe, Stanley Maxwell, *s, a, w, sp,* Charleston. S.B. '20.
Davidson, Thorald Edward, *s, a, w,* Chicago. S.B. (Drake U.) '18.
Dougherty, Clifford Lester, *s, a, w,* Marengo. Ph.C. (U. of Michigan) '11; S.B. (*ibid.*) '13.
Edwards, Ellis Hewitt, *a, w, sp,* Mulga, Ala. S.B. (Tulane U.) '21; Ph.G. (Alabama Polytech Institute) '11.
Elston, Ralph Wickwire, *s, a, w,* Angola, Ind. A.B. (Tri-State C.) '17; S.B. '20.
Erikson, Ralph Wennerberg, *w, sp,* Fairfield, Ala. S.B. '21.
Evans, Richard Donald, *s, a, w, sp,* Madison, Wis. S.B. (U. of Wisconsin) '21.
Finkelstein, Belle, *sp,* Chicago. S.B. '16.
Fishbein, William I., *a, w, sp,* Indianapolis, Ind. S.B. '21.
Fisher, Edith Tomhagen, *a, w, sp,* Chicago. A.B. '12; M.S. (U. of Wisconsin) '16.
Foord, Alvin, George, *a, w, sp,* Murray, Utah. S.B. '16; M.S. '17.
Fox, Noah, *s,* Chicago. S.B. '20.
Gaston, John Zell, *s, a,* Houston, Texas. S.B. '19.
Geiger, Sara Gertrude, *a, w, sp,* Carthage. A.B. (U. of Colorado) '14.
Gibson, Alvah Hazen, *s, w, sp,* Milwaukee, Wis. S.B. '21.
Gillespie, Emerson, *s, a, w,* Woodsfield, Ohio. S.B. (Ohio State U.) '21.
Gorder, Arne Christian, *s, a, w,* La Crosse, Wis. S.B. (U. of Wisconsin) '20; M.S. (*ibid.*) '21.
Graber, Rex Edgar, *a, w, sp,* Freeman, S.D. S.B. '20.
Graves Waldo Neil, *a, w, sp,* Logan, Iowa. A.B. (U. of South Dakota) '20.
Green, Raymond, *a, w, sp,* Chicago. S.B. '21.
Grogan, Roy Lee, *a, w, sp,* Fort Worth, Tex. A.B. (Baylor U.) '16; S.M. '22.
Guy, Chester Chappell, *a, w, sp,* Danville. S.B. '21.
Hamilton, Gerald Watson, *s, a, w,* New Plymouth, Idaho. S.B. '21.
Hansen, Adolph Marius, *s, a, w,* Los Angeles, Cal. S.B. (U. of Wisconsin) '21.
Hansen, Arthur Henry, *s, a, w,* Hammond, Ind. S.B. '21.
Harris, Ralph Lee, *s, a,* Chicago. S.B. '18.
Hatfield, Howard Lancing, *s, a, w,* Moscow, Idaho. S.B. (U. of Idaho) '19.
Hawkins, Winfred Weeden, *a, w, sp,* Lawrence, Kan. A.B. (U. of Missouri) '13; A.M. (*ibid.*) '14.
Hays, Victor Josiah, *s, a, w,* Chicago. A.B. (Morningside C.) '11; Ph.D. (U. of Iowa) '14.
Heatherington, Jean Robert, *s,* Bellaire, Ohio. S.B. '19.
Hemingway, Robert Wing, *s, a, w,* Mattoon, Wis. Ph.G. (South Dakota State C.) '16; S.B. (U. of Wisconsin) '21.

Hiss, Karl Louis, *s*, Toledo, Ohio. S.B. '21.
Hofto, Jalmar M., *s*, *a*, *w*, Grand Forks, N.D. A.B. (U. of North Dakota) '19.
Holcomb, Roger, *s*, *a*, *w*, Portland, Ore.
Homme, Owen Halvor, *sp*, Echo, Minn. A.B. (St. Olaf C.) '17.
Horick, Edward Joseph, *s*, *a*, *w*, Woodstock. S.B. '20.
Huang, Tse Fang, *w*, *sp*, Kulangsu, Amoy, China. U. of Hongkong Medical S; S.B. '21; S.M. '22.
Huml, Richard James, *s*, *a*, *w*, *sp*, Cicero. S.B. '21.
Hunt, Guy Anderson, *s*, Portage, Mont. S.B. '19.
Jacobson, Roland Arthur, *s*, *a*, *w*, Billings, Mont. S.B. (U. of Wisconsin) '21.
Jahsman, William Edward, *s*, *a*, *w*, Manawa, Wis. S.B. (U. of Wisconsin) '17.
Jewell, Ernest Lemon, *s*, *a*, *w*, Richland Center, Wis. S.B. (U. of Wisconsin) '21.
Johnson, Frances, *s*, *w*, *sp*, Ireton, Iowa. A.B. (U. of Iowa) '13.
Johnson, Harold Edward, *a*, Waterloo, Iowa.
Johnson, Richard George, *a*, *w*, *sp*, Vermilion, S.D. A.B. (U. of South Dakota) '21.
Kato, Katsuji, *s*, Osaka, Japan. A.B. (Kalamazoo C.) '09; A.M. '10; D.B. '11; Ph.D. '13.
Kaufman, Paul Myron, *s*, *a*, *w*, Youngstown, Ohio. S.B. '21.
Kilborne, Norman Joseph, *a*, *w*, *sp*, East Orange, N.J. A.B. (Yale U.) '15; A.M. (Columbia U.) '17.
Kjos, Clarence Eugene, *a*, *w*, Mayville, N.D. A.B. (U. of North Dakota) '21.
Klawans, Harold Leo, *s*, *a*, *w*, Chicago. S.B. '21.
Krohn, Irwin Kjelland, *s*, *a*, *w*, Black River Falls, Wis. S.B. (U. of Wisconsin) '20; M.A. (*ibid.*) '21.
Kwan, Sung Tao, *s*, *a*, *w*, Tientsin, China. S.B. '20.
Landis, Ralph Verl, *a*, *w*, *sp*, Waukarusa, Ind. S.B. (Jamestown C.) '19.
Landmann, Paul Emanuel, *s*, *a*, *w*, Scotland, S.D. A.B. (U. of South Dakota) '21.
Lawrence, John V., *a*, Terre Haute, Ind.
Leichenger, Harry, *w*, *sp*, Chicago. S.B. '22.
Lichtenstein, Meyer Ray, *a*, *w*, *sp*, Chicago. S.B. '21.
Lintner, Roy Christian, *w*, *sp*, Chicago. S.B. (Northwestern U.) '19.
Lommen, Ralph Gerald, *s*, *a*, *w*, Vermilion, S.D. A.B. (U. of South Dakota) '13; A.M. '16.
Lovett, Beatrice Russell, *a*, *w*, *sp*, Chicago. S.B. '19.
McCartney, James Lincoln, *w*, *sp*, Chicago. S.B. '21; M.S. '23.
McDougall, Tyrrell Glen, *s*, *a*, *sp*, Britton, S.D. S.B. (South Dakota State C.) '21.
Macdonald, Carolyn, *sp*, Chicago. S.B. '22.
Machlis, Samuel Arthur, *s*, *a*, *w*, Madison, Wis. S.B. '20.
Madden, Earl Emanuel, *a*, *w*, *sp*, Chicago. S.B. '21.
Matheson, Abe, *w*, *sp*, Chicago. S.B. '21.
May, Frederick Tracy, *a*, *w*, *sp*, Chicago. S.B. '21.
Mayer, Harry Jeremiah, *a*, *w*, *sp*, Chicago. S.B. '21.
Mead, Myra Imogene, *s*, *a*, Berthoud, Colo. S.B. '16.
Meyer, Samuel James, *s*, *a*, *w*, *sp*, Chicago. S.B. '21.
Milam, Daniel Franklin, *s*, *a*, *w*, Jacksonville, Fla. A.B. (Vanderbilt U.) '16.

Miller, Fred Nathan, *s, a, w,* Easton, Pa. A.B. (Lafayette C.) '14; A.M. (*ibid.*) '16.
Miller, Newton, *s,* Salt Lake City, Utah. A.B. (U. of Indiana) '05; A.M. (*ibid.*) '06; Ph.D. (Clark U.) '08.
Miller, Russell Howard, *a, w, sp,* Whitewater, Wis. S.B. (U. of Wisconsin) '21.
Moffat, William McKee, *w, sp,* Fort Wayne, Ind. A.B. (Lafayette C.) '15.
Morris, George Edward, *sp,* Burlington, Iowa. S.B. '22.
Murphy, George Thomas, *w, sp,* Chicago. A.B. (U. of Illinois) '20.
Nadelhoffer, Luella Esther, *a, sp,* Downers Grove. S.B. '21.
Nelson, Benjamin Tell, *s, a, w,* Chicago. S.B. '20.
Newcomb, Alvah Lay, *s, a, w,* Pepin, Wis. S.B. (U. of Wisconsin) '21.
Nickel, Allen Arthur Clarence, *w, sp,* Milwaukee, Wis. S.B. (North-Western C.) '15.
Nienhuis, John Edward, *s,* Oak Park. A.B. (Hope C.) '18; M.A. (*ibid.*) '22.
Olson, Ernest C., *w, sp,* Chicago. S.B. '22.
Owens, Guy, *s, a, w,* Amarillo, Tex.
Paez, Julio, *s, a, w,* Monclova, Coahuila, Mexico. S.B. (U. of Texas) '21.
Palmer, Donald Aimlee, *s, a, w,* Castle Rock, Colo. S.B. '20.
Peterson, Leo Willis, *a, w, sp,* Granton, Wis. S.B. (U. of Wisconsin) '21.
Pick, John Francis, *w, sp,* Chicago. S.B. '22.
Pickett, Catherine Montgomery, *a, w, sp,* Oak Park. S.B. '20.
Pinc, Otto Charles, *a, w, sp,* Chicago. S.B. '21.
Potts, Willis John, *a, w, sp,* Holland, Mich. S.B. '20.
Quaintance, Paul Atlee, *a, w, sp,* Bucyrus, Ohio. S.B. '20.
Quint, Harold Addison, *a, w, sp,* Des Moines, Iowa. S.B. (Drake U.) '21.
Rainey, Clarence Wager, *s,* Pueblo, Colo. S.B. '17.
Raube, Herbert Albert, *a, w, sp,* Waupun, Wis. S.B. (U. of Wisconsin) '20.
Rind, Rudla, *a, w, sp,* Seattle, Wash. S.B. '20.
Robinson, William Witten, *sp,* Spokane, Wash. S.B. '21.
Rosenbloom, Philip Jack, *w, sp,* Chicago. S.B. '21; M.S. '23.
Sandie, Joseph, *s, a, w,* Moorhead, Minn. A.B. (Fargo C.) '19.
Sanford, Heyworth Naylor, *w, sp,* Portland, Ore. S.B. '21.
Schaefer, Joseph Ernest, *s, a, w, sp,* Chicago. S.B. (Lewis Inst.) '20.
Schoenbeck, Robert Frederick, *s, a, w,* Dubuque, Iowa. S.B. '21.
Schubert, Clarence Karl, *a, w, sp,* Madison, Wis. A.B. (U. of Wisconsin) '20; M.S. (*ibid.*) '21.
Schwartz, Gilbert J., *s,* Pipestone, Minn. A.B. (U. of South Dakota) '20.
Serra, Americo Colon, *sp,* Ponce, P.R. S.B. '21.
Setzer, George Warren, *sp,* Chicago. S.B. '21.
Shaffer, Byron Grant, *a, w, sp,* Bryan, Ohio. S.B. (Ohio State U.) '21.
Simenstad, Lien Otis, *s, a, w,* Grand Forks, N.D. A.B. (U. of North Dakota) '21
Siminson, Irwin Dave, *s, a, w,* Denver, Colo. A.B. (U. of Colorado).
Smith, Harold Edward, *w, sp,* Maywood. S.B. '21.
Sullivan, Andrew Joseph, *s,* Chicago. S.B. '20.
Taylor, Ruth Elaine, *a, w, sp,* Emerson, Iowa. S.B. (Parsons C.) '18.
Theis, Frank Victor, *s, a, w,* Chicago. S.B. '20.
Thompson, Harold L., *s, a, w,* Bayard, Iowa. A.B. (U. of Iowa) '19; M.S. '21.
Thurston, Herbert Franklin, *s, a, w, sp,* Summitville, Ind. A.B. (Franklin C.) '19

Tiffany, Mary Neoskoleta, *a, w, sp,* Huntingdon, Pa. A.B. (Wheaton C.) '17.
Totten, Harold Price, *a, w, sp,* Vermilion, S.D. A.B. (U. of South Dakota) '21.
Turner, Edgar Cleveland, *s, a, w,* Cherokee, Iowa. S.B. (Grinnell C.) '17; S.M.
Van Dyck, Laird Sumner, *a, w, sp,* New York City, N.Y. A.B. (Rutgers C.) '15.
Vorisek, Elmer Albert, *a, w, sp,* Chicago. S.B. '21.
Vynalek, William John, *s, a, w,* Berwyn. S.B. '21.
Wair, Donald, *sp,* Chicago. S.B. '21.
Weil, Beatrice, *s, a, w,* Chicago. Ph.B. '18.
Weston, Frank Laurance, *s, a, w,* Madison, Wis. S.B. (U. of Wisconsin) '21.
Whitney, Homer Higgs, *s, a,* Fonda, Iowa. S.B. '21.
Wiedemer, Lottie Becht, *s, a,* Norwood, Ohio. A.B. (U. of Cincinnati) '13.
Wilhelmi, Lawrence, John, *s, a,* Joliet. S.B. (Knox C.) '17.
Wippern, Virgil, *a, w, sp,* Chicago. S.B. '21.
Woods, Bertrand Odell, *s, a, w,* Portland, Ore.
Woodworth, Philip Rollin, *a, w, sp,* Custer, S.D. A.B. (U. of South Dakota) '21.
Zavertnik, John Joseph, *sp,* Hinsdale. S.B. '20.
Ziskind, Eugene, *sp,* Chicago. S.B. '21.

Men—164 Women—14 Total—178

SPECIAL STUDENTS TAKING CLINICAL COURSES

Batschelte, Ethel, *s,* Chicago.
Cutting, Reginald Alex, *s,* West Somerville, Mass. A.B. (Howard U.) '14; A.M. '17; Ph.D. '19.
Dillon, C. A., M.D., Chicago.
Edidin, Louis, *s,* Chicago.
Genoff, David M., M.D., Winnipeg, Manitoba, Canada.
Gordon, J. E., *s,* London, Canada.
Groot, James T., *s,* Chicago.
Hagens, Elmer W., M.D., Chicago.
Hall, Alice K., M.D., Oak Park.
Hallinan, Marie A., *a, sp,* Chicago.
Hassig, Cecil E., *s,* Chicago.
Holderman, Jacob W., M.D., Chicago.
Jacquish, C. J., M.D., Mansfield, Pa.
Kelly, Bernice, *a,* Chicago.
Kirk, James A., M.D., Owensboro, Ky.
Leech, Vernon M., M.D., Chicago.
Litton, Louis, *s,* Chicago.
Lockwood, Chester H., M.D., Chicago.
Morrow, Thomas M., M.D., Wolf Point, Mont.
Norris, J. L., M.D., *s,* Lusk, Wyo.
Perkins, Frances J., *sp,* Chicago.
Powelson, Harry C., *s,* Columbus, Ohio.
Saan, John G., M.D., Eveleth, Minn.
Scott, Herbert J., M.D., Winnipeg, Manitoba, Canada.
Sheppard, Hubert, *s, sp,* Atlanta, Ga.

Sinai, Leah, *s*, Chicago.
Tranter, Paul, *s*, Armour, S.D.
Van Dellen, Alfred L., M.D., Chicago.
Van Hoose, Harold, *s*, Nolan, W.Va.
Waldman, L. F., M.D., Remsen, Iowa.
Warden, Marine R., *w*, Lyons, Kan.
Wolfram, Philip H., M.D., Chicago.

MEN—26 WOMEN—6 TOTAL—32

SUMMARY OF ATTENDANCE FOR THE YEAR 1922–23

	Men	Women	Total
Freshmen and Sophomores, less duplicates	187	43	230
Juniors, less duplicates	121	22	144
Seniors, less duplicates	164	14	178
Total, less duplicates	472	79	551
Special students taking courses in the fundamental branches, less duplicates	194	56	250
Practitioners taking clinical courses	12	5	17
Total	678	140	818